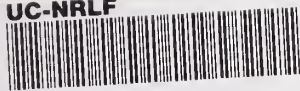
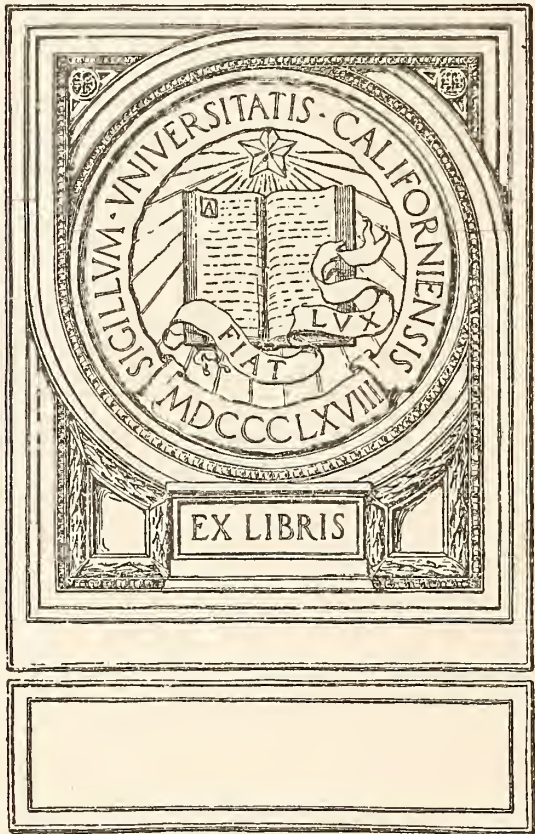


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No. 1

### The Use of Iodides in Goiter

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Read at sixty-first annual meeting of the Kansas Medical Society at Hutchinson, May 3-5, 1927.

The earliest authentic record which we have of the use of iodides in the treatment of goiter was made by Roger of the University of Salerno in the twelfth century. At this time he described goiters and recommended the use of the ash of sponges and seaweed in their treatment. That iodine was the active principle contained in the various remedies previously used was not known until 1820 when Coindet, a Swiss physician, published the result of his investigations and showed that iodine reduced the size of some goiters. In 1850 Chotin, a French physician, advocated the use of iodine in the prevention of endemic goiter and cretinism. Iodine after this began to be widely used in the treatment of goiter, in many cases with injurious rather than beneficial effect. In 1904 Kocher presented a study of the effects of iodine on the various types of goiter. He stated that diffuse colloid goiters of childhood and adolescence were the most benefited and that the nodular goiters of more advanced life were made worse. In 1910 he stated that iodine given to patients with hard nodular goiters produced all the symptoms of Basedow's disease except the eye signs and he warned against its indiscriminate use. The pendulum then swung to the other extreme and up to a few years ago some surgeons would not even use iodine for skin sterilization before operating goiters.

Since Marine and Kimball, in 1917, began the prophylactic treatment of endemic goiter and since Plummer, in 1923, published his paper advocating the use of Lugol's solution in the preoperative preparation of patients with exophthalmic goiter, much propaganda has been published by incompetent persons

so that today almost every layman feels qualified to give advice on the use of iodine in goiter.

There is still enough divergence of opinion among medical men concerning the use of iodine in goiter, that we cannot consider the question settled. One therefore cannot be too dogmatic in any opinion one has on the subject.

For the purpose of this discussion the following classification has been adopted:

1. Diffuse colloid goiter. This includes the uniform goiter of childhood in regions where goiter is endemic, the uniform enlargement of puberty and adolescence, the uniform colloid enlargements of early adult life and those associated with pregnancy and lactation.

2. The nodular colloid goiter which is just an uneven development of the previous class and often contains degenerated or fibrous areas, cysts or areas of calcification. This is the type that sometimes extends downward forming the intrathoracic goiter.

3. Adenomatous goiter. This class includes the nodular goiters starting often during puberty and showing symptoms of severe toxemia usually about the age of 40.

4. Fetal adenoma. These are encapsulated tumors of the thyroid occurring singly or more than one in otherwise normal thyroids or associated with any of the other types of goiter.

5. Exophthalmic goiter.

PROPHYLACTIC TREATMENT OF ENDEMIC OR

#### ADOLESCENT GOITER

Kendall, in 1916, isolated the active principle of the thyroid secretion which he called thyroxin. Sixty-five per cent of this compound consists of iodine. Marine and Kimball showed that the iodine content of the thyroid gland was from 1 to 2 milligrams per gram of the dried gland and that the total normal

amount does not exceed 25 milligrams or .1 to .2 per cent of the weight of the gland. Marine and Kimball have shown conclusively that if this normal saturation point is maintained by the oral administration of iodine in some form that the gland in practically all cases will not undergo hypertrophy or hyperplasia. Their experiments and those carried on by the Swiss have shown that the amount necessary to maintain this saturation point is approximately 10 milligrams a week. The exact amount is not arbitrary but 10 milligrams seems to be sufficient. Larger amounts do no harm but are unnecessary. Potassium iodide has been given for many other conditions even up to enormous daily amounts without provoking activity in normal glands. It should be given a short time before, during, and after the period of adolescence; that is from about the tenth to the sixteen year of age.

In localities where adolescent goiter is found only in a small percentage of children prophylaxis should be a matter entirely in the hands of the parents and the family physician. Small uniform palpable thyroids are very common everywhere during the period of adolescence, most of them disappearing without treatment. Where endemic goiter appears in a high percentage of children and persists, some form of general prophylactic treatment should be used. This may be carried out by public health officials working in conjunction with parents, teachers perhaps, and the family physician.

At the present time at least the use of iodized table salt seems a very inaccurate method of carrying out this treatment. The salt does not even always contain the amount of iodine indicated by its label as Kimball has proved in his laboratory. The nitrates and nitrites contained in the salt oxidizes some of the iodine. It would seem then that each child should receive its weekly tablet containing 10 milligrams of iodine or it may be given in the form of potassium iodide, syrup of ferrous iodide or syrup of hydriodic acid.

#### DIFFUSE COLLOID GOITER

Diffuse colloid goiter includes the uniform diffuse enlargements of the thyroid

occurring during adolescence or sometimes a little before and which sometimes persist and grow larger after that period, and the same type of enlargement that appears during pregnancy and lactation. As has been stated, many of the smaller enlargements of adolescence disappear without treatment of any sort. If a diffuse colloid goiter is visible or very easily palpable or if it persists or grows larger after the period of adolescence, small doses of iodine may be given. Theoretically 10 milligrams of iodine a week should be sufficient but from 2 to 6 grains of potassium iodide may be given each day and in those that persist after adolescence may give better results. Treatment should be continued for a year at least. Frequently no results whatever are obtained from the giving of iodides to patients with this type of goiter.

If the goiter is at all nodular iodine should not be given. If toxic symptoms develop the treatment should be stopped. Pregnant women who develop diffuse thyroid enlargement should be given from 5 to 10 milligrams of iodine weekly during the period of pregnancy and lactation. The Swiss have produced remarkable results in the elimination of congenital myxedema or cretinism by this form of treatment.

#### ADENOMATOUS GOITERS

Kocher in 1904, as has been previously stated, said that the hard nodular goiters were often made worse by iodine. Lahey of Boston finds nontoxic adenomatous or nodular goiters made toxic by the giving of iodine. Jackson of Madison has recently reported a number of cases which he calls iodine hyperthyroidism and we have seen some in our clinic in which we thought the toxic symptoms were started and aggravated by the giving of iodine. It seems that in this type of goiter the gland once excited by the giving of iodine continues its activity even if the giving of the drug is entirely discontinued and that thyroidectomy alone is then the only cure for the condition. To be safe then iodine should not be given at all to any patient having a nodular goiter whether or not this patient shows symptoms of thyroidism.



## FETAL ADENOMA

The fetal adenoma is the spherical enlargement occurring singly or more than one, found sometimes in normal thyroids or associated with any other type of goiter. They are true encapsulated tumors of the thyroid and iodine has no place in their treatment. They produce severe toxic symptoms at any time but often not until 50 or 60 years of age. Their treatment is entirely surgical and the cure is complete after removal.

## EXOPHTHALMIC GOITER

Even before Kocher's time the beneficial effect of iodine on exophthalmic goiter was noted. As the prevailing goiter of Switzerland is the nodular adenomatous type and as Kocher did not make a distinction between the toxic adenomatous goiters and the real Basedow's disease his reports of bad results from the use of iodine caused its use in exophthalmic goiter to be abandoned until Plummer, in 1923, revived its use. Working on the theory that in exophthalmic goiter the gland is stimulated to enormous over-secretion and that either through lack of iodine or the inability to assimilate it, an imperfect thyroxin molecule, i. e., one lacking in sufficient iodine, is produced which is highly toxic and produces the symptoms of the disease. This has not been proved but seems reasonable.

Plummer advocated the use of Lugol's solution in 10 minim doses three times daily in the preoperative preparation of exophthalmic goiter patients. The value of this has been fully demonstrated in every goiter clinic throughout the country. There is a marked decrease in the intensity of all the toxic symptoms and a corresponding drop in the basal metabolic rate. The maximum improvement is obtained in from 7 to 20 days, usually 8 to 12. This level is maintained for a time after which the symptoms of toxemia increase in severity and the basal metabolic rate goes up. The continuance of the iodine treatment never brings about the same marked improvement. The patient should be operated on within 4 or 5 days after the period of maximum improvement is reached. If this is done, the immediate postoperative tox-

emia is not nearly so severe as in those patients who have not been prepared with Lugol's solution. If the patient is carried past the period of maximum improvement, he can never be brought back to the same favorable condition by the giving of iodine.

Plummer made it perfectly plain that iodine was not a treatment for exophthalmic goiter and advocated it only as a part of the immediate preoperative preparation. It should, therefore, never be given until the patient is in the hospital with his mind made up to undergo operation when the favorable moment arrives. As the time of maximum improvement varies in different patients, it argues again against its use until the patient is in the hands of the surgeon.

Occasionally the toxic symptoms are so severe and the physical deterioration so complete that even after the use of Lugol's solution a complete operation should not be done but rather the removal of one lobe followed by a second operation a few weeks later. In view of this fact is constituted a **third reason** why the patient with exophthalmic goiter should not be given Lugol's solution before being sent for surgery. The apparent improvement misleads the surgeon into doing an unwarranted radical operation which he might not do had the patient been under observation before and during the period of iodine administration.

## SUMMARY

Iodine in 10 milligram doses weekly should be used during the period of adolescence in regions where goiter is endemic or at least frequently seen.

It is at least safe to try iodine therapy where the patient is under frequent observation in uniform diffuse colloid goiters persisting after adolescence, and should be used in those appearing during pregnancy and lactation.

Iodine should never be given to the nodular or so-called adenomatous goiter patients.

Iodine should never be given as a form of treatment for exophthalmic goiter. It should only be given in these cases as a step in the preoperative preparation with the patient in the hospital

and under the supervision of the surgeon who is to perform the thyroidec-tomy.

### R **Coronary Occlusion**

C. E. COBURN, M.D., Kansas City

Read at sixty-first annual meeting of the Kansas Medical Society at Hutchinson, May 3-5, 1927.

In the study of mortality and morbidity statistics the mounting percentage of disease and death from affections of the circulatory system is very marked. That some of this increase is only apparent is admitted, although all agree that there is a real increase.

One of the startling and tragic types of this class of diseases is Coronary Occlusion. The suddenness of the death—often with no warning or opportunity to call medical assistance—sends a considerable portion of these cases to the autopsy table of the coroner. Others are seen by physicians who on hasty investigation may assign acute indigestion as the cause of illness or death, which is a rather uncommon cause of death; or he may decide the difficulty to be some type of acute poisoning.

From the fact that pain is not unusual with these cases the question of the relation of coronary sclerosis or occlusion to angina pectoris has been much discussed. There have been recently published analyses of several groups of heart cases coming to autopsy with findings of some interesting facts.

At the Mayo Clinic, Willius and Brown studied the findings of 86 consecutive proved cases of coronary sclerosis. Twenty-one patients had typical attacks of angina pectoris without evidence of heart failure. Sixty-six per cent had decided occlusion of the lumen of the vessels. Of the 21 cases, only 4 showed syphilis of the aorta. Twenty-six per cent showed clinical signs of progressive myocardial failure without pain symptoms, and it was reported that the sclerosis in these cases was not so marked as in those having typical attacks of angina. Forty per cent did not show signs sufficiently marked to permit a diagnosis of coronary disease, and may be referred to as the occult type. In all the hearts examined in this series, the myocardium had undergone a great-

er or less degree of degeneration. The analysis showed also that one-third had a considerable degree of hypertension which is considered to be a serious prognostic factor. Thirty-seven per cent of the sclerosis cases died suddenly, the highest incidence being in the angina cases.

A grouping of all those reported is made by Willius as follows:

1. Typical angina pectoris.
2. Atypical angina pectoris.
3. Progressive myocardial failure.
4. Angina pectoris and progressive myocardial failure.
5. Occult coronary sclerosis.

Cabot of the Massachusetts General Hospital, in his compilation of "Facts on the Heart," reports the following interesting analysis of 138 cases coming to autopsy, and classified as follows:

- a, Coronary narrowing without angina, 94.
- b, Coronary narrowing with angina, 33.
- c, Angina without coronary narrowing, 11.

Another item brought out in this report was that the disease predominated in males in the ratio of 10 to 1. This report demonstrates as others have done that coronary disease is often absent in those having a definite history of angina. In at least 6 of these 11 cases reported, a careful microscopic examination of the entire aorta showed it to be normal. Blood pressure was high in one case, normal in three, and in the remainder it had not been measured.

Cabot's conclusions from this study are as follows: 1. Coronary sclerosis and occlusion is a cause of pain and collapse seen in cardiac infarction, but bears no certain relationship to angina pectoris proper. 2. Extensive coronary occlusion is not infrequent in the hearts of patients who during life have never suffered from angina. 3. When a coronary is suddenly blocked by a clot, death may follow at once, with or without pain.

An extensive report of the history and pathology of coronary disease was recently published by Robt. L. Benson of the Department of Pathology of the University of Oregon, and from which I quote freely.



It is clearly shown in this report that in the 18th century disease of the coronary arteries and of the myocardium were associated.

As the studies of heart pathology and clinical symptoms have advanced, it is recognized that in many instances there is a combination of several processes, namely: arterio-sclerosis, thrombosis, and sometimes embolism. In 1880 Weigart pointed out the complete analogy between coronary infarction and the same process in other organs. In 1887 it was demonstrated that a softening of the heart muscle and not aneurysm, was the direct precursor of ruptured heart.

The incidence of coronary obstruction is considerable, but Benson points out as do other writers quoted that the majority of sudden deaths from coronary obstruction are found by coroner's autopsy rather than diagnosed by the hospital or private physician. As to the actual rupture of the heart, seven cases in 16,000 autopsies were reported from the Philadelphia General Hospital. On the other hand, another series of 1750 autopsies showed 14 ruptures.

It of course would be futile to attempt an accurate estimate of the frequency of cardiac infarcts and aneurysm. In 175 necropsies made in cases of cardiac deaths in Philadelphia, fibrous myocarditis was found in 34 cases, and acute obstruction in 25. It would appear that coronary disease is much more common than former statistics have indicated.

A study of the circulation of the heart shows that most of it is carried by the coronary arteries and to a small extent is acquired through the thebesian vessels and vessels outside the heart. Considerable variation in the anastomosis of the arteries occurs. Some hearts have no anastomosis of consequence, some very little, and in others the anastomosis is free. Sudden occlusion in those arteries without anastomosis probably produces immediate death, while in others with good anastomosis the accident is quite well tolerated.

The most common changes that occur in the arteries are of a mixed type, namely: chronic narrowing, and sudden thrombosis or embolism. It is to be remembered that many thrombi form not

only from diseased blood vessels but also from abnormal conditions of the blood itself.

Embolism of the coronary arteries is rather rare because of the anatomical condition present. That is to say, the right angled manner in which the arteries come off from the aorta.

An interesting fact in connection with the infarction cases, and one that sometimes helps in the diagnosis is the presence of a greater or less degree of leucocytosis ranging from 10,000 to 20,000, and often accompanied by a slight temperature and a localization of pain in the upper abdomen. This situation has led more than once to a diagnosis of some type of acute abdominal disease and the patient submitted to operation.

Benson concludes his article by the following statement: "Coronary thrombosis and infarction are found as the cause of the majority of spontaneous sudden deaths in a large coroner's necropsy service. Coronary thrombosis is established as the cause of immediate death when the occluded vessels are terminal arteries; infarction in hearts having some degree of coronary anastomosis; and little or no immediate damage in those which pre-natally or through disease have acquired adequate collateral circulation."

With the percentage of sudden deaths from this difficulty ranging quite high, the opportunity to see and study clinical symptoms is limited, and even in those under observation the symptoms are variable. It is no very uncommon experience to hear of men who have passed middle life, drop dead without warning, and with no previous sickness, and to discover that thrombosis of the sclerotic coronary or final closure by the sclerotic process was the immediate cause.

Paroxysms of Dyspnea are common, especially so in combination with aortic insufficiency. Pain in the precordium and often behind the sternum and also tenderness over the interspaces and down the arm are sometimes present. Contrary to typical angina pectoris, this pain is not relieved by the use of **nitrites**. Men expert in the interpretation of electrocardiograms tell us that there is always a strong suspicion of

coronary sclerosis and myocardial change where a T wave negatively is shown.

The following case report illustrates to some extent the character of symptoms found in coronary sclerosis and occlusion:

Rev. R., a retired minister of 78 was sent to a hospital four years ago with some condition diagnosed by his physician as acute indigestion, but was discharged within a few days as recovered. From the date of this attack until the date of this present illness he experienced dyspnea on exertion and occasionally pain in the region of the xiphoid cartilage. For several months past he suffered much distress on exertion and had to stop frequently and rest during a walk of a few blocks, particularly if walking against the wind.

One week previous to his second entry in the hospital he was seized with very violent pain over the lower sternum, vice like in character, and frequently extending to the neck and shoulders and sometimes down the right arm. A very great desire to vomit with persistent straining was present and accompanied by cold sweat and feeble irregular pulse. Pain was not relieved by nitrites, but eased by morphine. Recurring attacks of this character at irregular intervals made it necessary to put him in the hospital. His intense dyspnea continued and the agonizing gripping pain usually associated with vomiting required frequent doses of morphine. His temperature reached 100.5° and his leucocyte count was 14,600. He died on the 3rd day following his entry into the hospital.

The necropsy report made by the staff of the Kansas University School of Medicine contained among other findings the following: The thoracic cavities contained two quarts of fluid. The heart weighed 400 grams, and numerous pericardial adhesions were present. The right ventricle was 6 to 7 mm. in thickness, while the left measured from 4 mm. to 2 cm. The chordae tendinae and the columnae carnae were scarred. The myocardium was diffusely scarred and the left branch of the left coronary was completely occluded. The anatomical

diagnosis as to the heart condition was chronic adhesive pericarditis, chronic sclerotic myocarditis, coronary sclerosis with coronary obliteration, infarction of the myocardium and partly healed infarcts of the myocardium. The gall bladder contained one fairly good sized stone and showed numerous adhesions.

### Suicides

KARL A. MENNINGER, M.D., Topeka

Read at sixty-first annual meeting of the Kansas Medical Society at Hutchinson, May 3-5, 1927.

Suicide is a form of death which should concern us as physicians no less than tuberculosis or cancer. It is a malady that seizes upon and overcomes its victims at susceptible periods; it has signs and symptoms and can be recognized before it is fatal. Properly treated it can be prevented. As guardians of the public health, therefore, it is the doctors' task to attack the problem of suicidal death by scientific methods.

Some of us feel that death by murder is also a field for medical science—preventive if not therapeutic. As the study of the psychology and physiology of behavior disorders, including crime, progresses, we shall be better prepared to discuss the medical aspects of murder. But with suicide we are already familiar.

Suicide is far more obviously than murder the act of a diseased personality. Plato saw this over two thousand years ago and said that no one in his right mind would take his own life.

Moreover, suicide is a far more important problem than murder, in spite of all the clatter about the terrible crime wave. In the first place, suicide is more frequent; e. g., there are about fifteen thousand suicides per year in the United States and only about ten thousand homicides. And in the second place, the victim of homicide is often a bootlegger, a burglar, a gambler, etc., whereas the suicide is usually a superior man. This is established by personal experience and statistics. In 1923, 62 physicians died of this cause, 48 lawyers, 14 ministers and over 200 able business men; 25 editors, 50 club women. Every day the newspapers herald reports of suicidal deaths among desirable citizens.



To the psychiatrist, familiar with mental sickness in all forms, suicide is an ever-present foe. He recognizes it as a frequent cause of death among his otherwise recoverable patients. Knowing them intimately, he knows how inadequate any simple explanation of the act must be. In general, it is the solution a certain type of patient makes to a (for him) unbearable situation. The psychiatrist of today considers mental disease to be indicated by unhappy or inefficient adaptation to life, and in the struggle to avert this the psychopathic patient is apt to choose suicide as one of the ways out. There are other ways—morphine, delirium, day-dreaming, an alcoholic spree, a good cussing, or perhaps even a fishing trip.

The psychiatrist sees many suicides and attempted suicides in his patients and ex-patients. They are, in a sense, his failures. But sometimes he fails because he lacks co-operation. He lacks the understanding on the part of relatives (and sometimes doctors!) of what the pre-suicidal state looks like. If this could be remedied, much suicide could be prevented. The novels and newspapers have very definite ideas about suicide, most of which are wrong. For the motives impelling man to this unhappy solution are never so simple as newspaper reports would indicate. Suicide is *never* caused by a single thing, such as ill health, unrequited love, grief over an erring daughter, etc. Nor is suicide ever the first symptom of the mental state which it terminates. Hence the importance of a better knowledge of them.

#### MELANCHOLIA

There are different types of mental disease of suicidal trend but most common are the simple depressions or "Melancholias," which are far more numerous than many suppose. In these, the patient frequently gives little external evidence, at first, that anything is wrong. He may be slightly less communicative than usual, a little less active, less interested in social events and amusements. He may not complain at all, and even insist that he feels fine, or he may admit that he feels a little tired, or has a headache, or is worried

over the crops or business.

These symptoms usually grow worse, but they are often kept well hidden by the patient. More and more, however, it becomes apparent that he is "blue," and usually he will admit it. Sometimes he will say there is no cause at all for it; sometimes he will blame it on business conditions or a love affair; sometimes he will say he has sinned and cannot be forgiven of God, or that he is going to be ruined or damned. All of these are false. There *are* causes for these depressions, to be discussed later, but the *patient rarely knows them*, even although he may convince the relatives and they (subsequently) the newspaper reporters.

At this stage and throughout the entire illness, such cases are dangerous suicide risks. If asked about it, they will often admit their plans or hopes for death, but they rarely mention it spontaneously and often deny it, thus throwing the unknowing and worried relatives off their guard. They are suffering intensely, and silently, and death seems sweet. Family and friends try in vain to cheer them up, and plan trips and parties and vacations and visits, all of which only increase the suffering. All the more they are impelled to find a way out when opportunity presents itself to escape the family. We could cite innumerable examples of this: A patient who stuck his head in the bath tub after his nurse had bathed him and left for a moment, a patient who hanged herself with her shoestring, a patient who cut his wrists with a broken electric light globe, a patient who battered his head against the wall, and of course any number who shot, hanged and poisoned themselves.

Yet they rarely attempt suicide in the presence of another person. Hence it is usually not difficult to prevent if the danger is recognized; and properly treated these depressions gradually lift, and the patient recovers his normal emotional balance and has no more urge toward suicide. Great care should be exercised, however, not to assume that the temptation is gone too soon, just because the patient appears cheerful.



Some of our greatest tragedies have occurred under these circumstances.

The evidences of the psychic tumult and disruption within, which will lead to suicide, are not always found in emotional depression, although it is the most frequent. There are suicides in association with inferiority complexes, with sexual abnormalities and psychopathies, with other types of brain disease such as paresis, and most important of all in some apparently "normal" persons. But of course such persons belie the adjective "normal" by the act of suicide, and many of us familiar with the hidden struggles of persons passing as "normal" know how great is their pain.

#### THEORETICAL ASPECTS

Far from the theoretical standpoint, suicide is the turning upon one's self of an attack directed by hate, usually unconscious hate. Combined with this are other factors, chief among which is exhibitionism—a dramatization of the childish phantasy of "I'll go and die and then they'll be sorry they treated me so mean—they'll see me lying there all dead and know how I suffered, etc." This is particularly true of the suicide in connection with love affairs. Suggestion is also a powerful factor, particularly in certain guises, such as newspaper exaggerations, e. g., student suicides.

In other words, the suicide is a person of excessive and unstable make-up who meets with reverses which he cannot, or feels he cannot, bear, and solves this by a flight from reality in which he impulsively strikes a blow which cannot be rescinded, expressing simultaneously his hate, his fear, his despair and his longing for peace.

#### COLLEGE STUDENTS

College students, in the acute pressure of a violent readjustment of their lives to strenuous requirements at a critical age period, present many psychiatric problems of which suicide is an occasional spectacular termination. The recent newspaper sensationalism reporting ten suicides in two months loses sight of the great numbers of less heralded failures in college, and of the mass of preceding distress leading up to the failures. For we must continually bear in mind that suicide is never the first act

of the tragedy. Even the man who kills himself after discovery in embezzling funds from the bank to pay debts incurred by gambling, for example, has actually begun to commit suicide long before he pulls the trigger of the revolver. He has been committing suicide long before he begins to take money from the bank. He has, in a sense, begun to commit suicide when he gambles, and he is forced to gamble for psychological reasons of which he probably has not the least comprehension\*.

College students and others commit suicide in innumerable ways besides hanging and shooting themselves. Some of them commit suicide by totally disregarding their studies and failing in all of their work, or passing with the lowest possible grades. Others commit suicide by social exclusiveness, and still others by social seclusiveness. These might be called suicides among the living.

#### PRACTICAL ASPECTS

There are certain practical considerations that should be drawn as a moral from a study of suicides. I hope I have proved my point that they are all medical problems. (1) All depressions and all other evidences of adaptation failure should command the physician's attention. (2) All depressions should be treated as potential suicides. (3) Rarely should they be treated at home; this is inadequate and it is dangerous.

Not long ago one of my medical friends wrote me of a patient of his who had been despondent, who was reading a great deal and who would not leave the house, and wondered how best he could treat him in view of the fact that he would not come to the office for electrical treatments, etc. I wrote him that it was exceedingly inadvisable for him to attempt to take care of the man that he described, at home; that if anything happened, as it was exceedingly likely to do, the blame would be put on him, and

\*There are such things as unconscious suicides—accidents and diseases brought on by the patient with an unconscious motive. Some of these appear to be accidental (and inevitable) even to the perpetration. Many fatal accidents must be regarded by an impartial student aware of all the facts as "accidentally on purpose." I am assured by some of the most eminent phthisiologists that tuberculosis is often quite clearly a form of unconscious suicide on the part of a patient who has conflicting wishes both to live and to die, but is unaware of his success in gratifying the latter underhandedly as it were, in a capitulation to the bacilli of Koch.

moreover that there was no adequate treatment that he could give at home anyway. The doctor wrote me some time later that the patient's relatives had been unwilling to take him to a sanitarium and shortly after my letter came he had cut his throat.

Another illustration (Case 1535): A wise, kindly, old farmer, who had lived in the same homestead for fifty years but who had several times in his life had brief attacks of agitated depression, particularly in the spring when some sort of change in the farm administration was being made, was brought to the clinic. One of his attacks of depression had begun. He had the feeling that he was going bankrupt, was perhaps already ruined, that he hadn't done enough work for God, and that he might lose his mind.

We recommended that he be hospitalized immediately, but his relatives said they could see no necessity for this, that it was just one of his attacks from which he always recovered. In our record of his case is the following note: We warned Mrs. W. that her husband might take his life, that if she did not take our advice she must take all the responsibility if he did commit suicide. She said she would take it all.

Three weeks later he was found dying in a shed on his farm, having pounded himself in the head with a hammer.

Almost as bad as home treatment, or perhaps a little worse, is trip treatment. A woman of 50 complained of nervousness, despondency, disinterest in life, flatulence, backache, headache. She was examined by several very capable physicians, and was told to take a trip to Colorado, that it would do her good to get away from home, etc. This is exceedingly dangerous advice for mentally sick patients. Try as they may they cannot get away from themselves, and very few of these cases are actually made sick by their environment. This particular patient made the trip as advised, but dived out of the car window on the way.

Patients are frequently removed from the hospital too soon, before they have fully recovered, in an effort to conserve resources. Mrs. T. had been under our

care for seven or eight months and had made a remarkable apparent recovery from a very severe depression. Her husband was hard pressed financially and we consented to his removing his wife on condition that he get some one to stay with her constantly for the next three months. He said she seemed so cheerful and so like her old self that he scarcely thought it necessary but would do so if we insisted. All went well for about a month, when one day the woman whom he had hired to stay with his wife in the day time, was ill and he had a call and thought he would take the chance because she seemed perfectly well. She got his early breakfast and when the children got up she prepared their breakfast, washed them and dressed them and sent them to school. Then she cleaned up her house neatly, put everything in order, went to the barn and hanged herself.

It is exceedingly difficult, but exceedingly important, to convince some relatives that certain patients are actually suicidal. Some will even admit that their relatives are mentally sick, but surely they wouldn't do anything like that, they say. The general practitioner should clear his own skirts by telling the relatives of any depressed patient that suicide is a possibility and that the responsibility is theirs. A man consulted us for some stomach trouble. He said he had a good deal of constipation, flatulence, sluggishness, and sleeplessness. He stayed at the sanitarium a few days but said that it wasn't the kind of a sanitarium that he wanted, that Battle Creek was the type of thing he needed, that there was nothing the matter with his mind. His wife was particularly indignant when we assured her that he was a mentally sick man and needed hospital treatment. She abided by her husband's own diagnosis of his case absolutely and left in considerable indignation, saying that her husband was perfectly all right except for a little stomach trouble and overwork and worry, and she would take him to a doctor who understood his case. Shortly afterwards he committed suicide in his hotel while undergoing treatment at another clinic.

A man, 33 years old, whom we ex-



amined very carefully with the assistance of several other physicians, had lost some seven thousand dollars in the cattle market and his whole family had had influenza. He became blue and melancholy, awakening early in the morning and feeling oppressed with thoughts of failure and hopelessness, anticipating the starvation of his children, the ruin of his family, etc., and feeling totally incapable of doing his work. When asked if he wanted to die, he evaded the question but said he felt pretty hopeless at times, but didn't want to discuss it.

I talked to the father, assured him that his son was very ill, was undoubtedly suicidal and should be treated as a sick man in a hospital, with the most careful nursing attention. The father laughed us out of court, said that the idea was absurd, that he knew his own son and he guessed he hadn't come to anything like that. This was on May 27th. On June 20th I had a letter from the family physician enclosing a newspaper clipping stating that "Poor health is believed to have been the cause of the death by suicide of a prominent young farmer of this vicinity whose wife and children found him hanging from the rafters of the barn."

#### CONCLUSIONS

Physicians must aid in the happier solution of such maladjustments and in the prevention of disasters such as these. Because of their familiarity with the mechanisms of human failures, their knowledge of the queerness of people, psychiatrists may assist in preventing some of the otherwise inevitable defeats. The earlier and milder cases are the task of the family physician, who must act in the capacity of psychiatrist in many instances, distinguishing between benign and malignant cases. He must practice minor psychiatry just as he practices minor surgery. Major psychiatric problems should be sent to the hospital just as one sends major surgical cases to the hospital.

The responsibility for the prevention of death by suicide lies with the doctors. Especially must the family physician assume this burden because his early contact with potential cases supplement-

ed by his knowledge of the possibilities can indicate an effective handling of these emergencies.

—R—

### The Diagnosis and After Treatment of Severe Infections of the Hand\*

SUMNER L. KOCH, M.D., Chicago

Read before the Shawnee County Medical Society, Topeka, Kansas, October 3, 1927.

For much of our practical knowledge concerning the diagnosis and treatment of infections of the hand, we are indebted to Dr. Kanavel<sup>1</sup>, whom many of you know both as a native of your state and as a distinguished surgeon. It is an obligation and a privilege to acknowledge our indebtedness to him. Whatever I am able to tell you concerning hand infections has been learned in the past eleven years during which I have had the privilege of being associated with him in the care of these cases.

There are three types of severe infection of the hand of every day occurrence—acute lymphatic infections, infections of the tendon sheaths, and infections of the fascial spaces of the palm.

The diagnosis of acute lymphatic infections hardly needs emphasis. The patient often makes the diagnosis himself. After what frequently appears to be a trivial injury the infection begins abruptly, often with a chill, with high fever, and with rapidly developing signs of a systemic infection. Locally there is diffuse swelling extending upward from the site of inoculation, throbbing pain, tenderness and red lines running up the forearm.

This combination of systemic and local symptoms, and particularly the presence of red lines extending upward along the lymphatic channels of the forearm, are the danger signals of an acute fulminant infection, an infection that demands the utmost conservatism in treatment and surgical intervention only when localization of the infection is so definite that there can be no doubt concerning the presence of pus.

Absolute rest in bed, forced administration of large quantities of fluid and the application of a hot, moist dressing that includes the entire upper extremity

\*From the department of surgery, Northwestern University Medical School.

are the essential details of treatment. Not infrequently it is difficult to impress the patient with the seriousness of the situation and still more difficult to abstain from ill advised surgical treatment before a walled off abscess has formed.

Such an instance developed under our immediate observation two years ago and its tragic outcome emphasizes the seriousness of this type of infection. A junior medical student on his service at the Lying-In dispensary infected a scratch wound on the dorsum of the index finger. The finger became somewhat swollen and painful, and he persuaded one of the surgeons in the Out-Patient department to incise it under a local anesthetic. No pus was found. The following day the finger was more swollen and painful; there were a few red lines running up the forearm and the patient was obviously ill. He was told to go to bed, to drink a lot of water, to put a big, hot dressing on the forearm, and that under no circumstances must any one be allowed to incise the finger. He rather protested against this advice; he still thought there was pus in the finger, but because he assured us that he would carry out the treatment at home he was permitted to go. Nothing was heard from him, and the matter was forgotten until ten days later when in glancing at the bulletin board I saw a notice that the junior class was excused for the afternoon to attend the funeral of this boy. He had gone home from the hospital, persuaded a doctor in his neighborhood, whom he assisted during his spare hours, to incise the finger, and within 24 hours had developed a severe chill, a temperature of 105 degrees, and all the signs of a malignant generalized infection. Within two days symptoms of pulmonary involvement appeared and the condition rapidly went on to a fatal termination.

In such cases if one cannot succeed in bringing about a localization of the infection by conservative treatment, he may be certain that surgical intervention will only hasten the fatal outcome.

#### THE TENDON SHEATHS AND FASCIAL SPACES OF THE PALM

The position of the flexor tendon sheaths of the palm is indicated in the

accompanying diagram (Fig. 1). The sheaths of the index, middle and ring fingers extend upward from a line just distal to the distal flexion crease of the finger to a line a thumb's breadth above

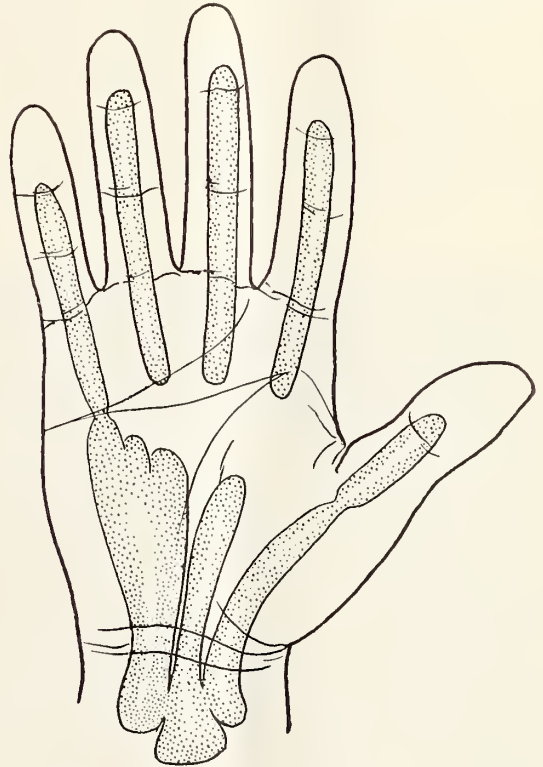


Fig. 1. The relation of the flexor tendon sheaths to the superficial markings of the hand.

the web of the fingers. The sheath of the flexor of the thumb extends upward from a line just distal to the distal flexion crease of the thumb, continues through the palm as the radial bursa and ends a thumb's breadth above the anterior annular ligament. The flexor tendon sheath of the little finger begins distally at a similar line, continues upward through the palm as the ulnar bursa and ends a thumb's breadth above the anterior annular ligament. In the great majority of cases the radial and ulnar bursae communicate with one another above the wrist, so that an infection beginning in the tendon sheath of the thumb rapidly passes upward through the radial bursa, crosses to the ulnar bursa and spreads downward through the ulnar bursa and the tendon sheath of the little finger. The converse, of course, is also true.

When pus ruptures from the tendon sheath of the index finger it usually rup-



tures into the thenar space and spreads distally along the lumbrical canals of the index finger (Figs. 2, 3). Pus rupturing from the tendon sheath of the mid-

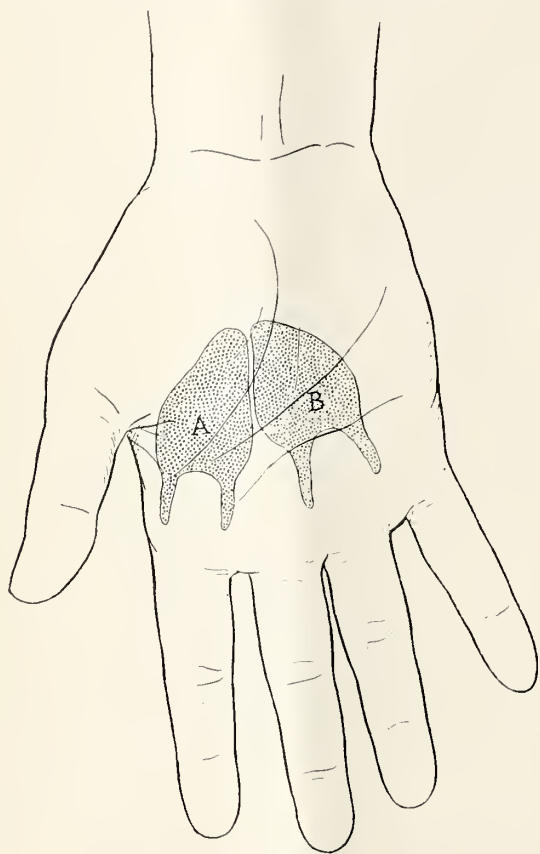


Fig. 2. Diagram of an X-ray picture of a hand in which the thenar and middle palmar spaces have been filled with bismuth paste. A thenar space; B, middle palmar space. (After Kanavel.)

dle finger and ring finger enters the middle palmar space and spreads distally along the lumbrical canals of the middle and ring fingers (Figs. 2, 3). It

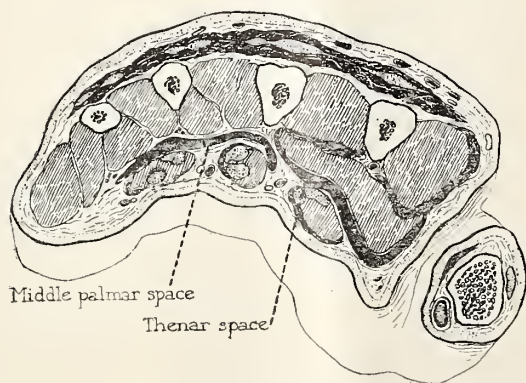


Fig. 3. Cross-section of the hand, just above the metacarpophalangeal joints, to show the relation of the thenar and middle palmar spaces to the surrounding tissues. (After Kanavel.)

should be remembered that the thenar space lies underneath the flexor tendons of the index finger, upon the adductor muscle of the thumb, and is bounded on its ulnar side by the middle metacarpal bone (Fig. 3). The middle palmar space lies underneath the flexor tendons of the middle and ring fingers and is overlapped by the ulnar bursa. It lies upon the deep layer of the palmar fascia which covers the interosseous muscles and the metacarpal bones, and is bounded on its radial side by the middle metacarpal bone (Fig. 3). Pus rupturing from the radial and ulnar bursae characteristically breaks through at the upper end of the bursae and comes to lie in the cellular space underneath the flexor tendons, volar to the pronator quadratus and the interosseous membrane. If not drained, the infection spreads upward, dissects between the superficial and deep flexor muscles and tends to become superficial on the ulnar side of the upper third of the forearm.

With neglected tendon sheath infections involvement of the adjacent bones inevitably develops, extensive destruction of the soft tissues takes place, and rupture through the palmar fascia and skin finally occurs with the formation of persistent sinuses.

The diagnosis of a tendon sheath infection of the index, middle or ring finger depends on a few definite and characteristic symptoms. First, there is diffuse swelling and redness, which is usually marked on the dorsum of the finger because the soft tissues of the dorsum are more distensible than the firm fibrous flexor tendon sheaths, and because the lines of lymphatic drainage pass to the back of the hand. Second, there is tenderness which is definitely limited to the anatomical outline of the sheath. Third, the finger is held in a slightly flexed position, and any attempt to extend it causes excruciating pain.

With infections of the thumb and little finger the same symptoms are present in an exaggerated form. The swelling, pain, and tenderness are more diffuse because of the greater area involved. In addition to the swelling of the hand itself there is a slight bulging of the soft tissues above the anterior annular liga-



ment, which becomes more marked as the condition progresses. The pain on attempted extension of the thumb and little finger is quite as definite as in the case of the other fingers, but in neglected cases this symptom tends to disappear because of the partial anesthesia of the median and ulnar nerves produced by the pressure of the inflammatory exudate.

One symptom worthy of note, particularly in those cases where the infection has started in the tendon sheath of the

bulge both on its palmar and dorsal aspects and the thumb is literally forced away from the hand by the pressure of the retained pus (Fig. 4). With infection of the middle palmar space the striking symptom is the loss of the normal concavity of the palm. Swelling of the dorsum is marked because of the distensibility of the soft tissues on the dorsum and because the lymphatic vessels draining this area take the shortest route to the back of the hand.

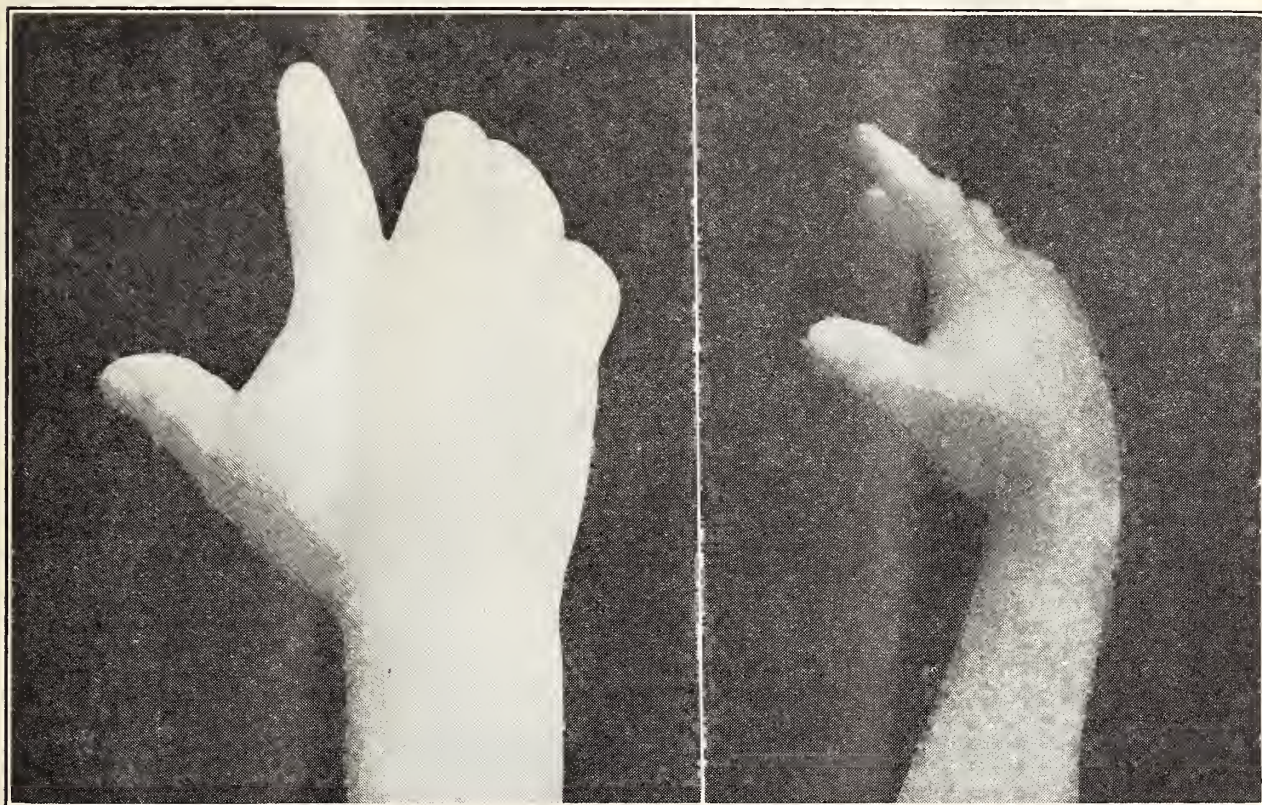


Fig. 4. The characteristic deformity present in an infection involving the thenar space.

thumb, and where there may be a question as to its extension to the ulnar bursa and the sheath of the little finger, is the localized point of tenderness just proximal to the point where the distal flexion crease of the palm meets the hypothenar eminence.

When pus ruptures from the tendon sheath of the index finger into the thenar space, or when, as occasionally happens, the space is infected through a penetrating wound, the thenar area becomes distended out of all proportion to the remainder of the hand. It seems to

#### TREATMENT OF TENDON SHEATH AND FASCIAL SPACE INFECTIONS

The treatment of infections of the tendon sheaths and fascial spaces is to secure adequate drainage as soon as the condition is recognized. This should be done under a general anesthetic such as nitrous oxide, ethylene or ether, and through a bloodless field secured with the aid of a constrictor.

In draining the tendon sheaths of the fingers the incision should be made well to the side of the finger (Fig. 5), so as to avoid the digital nerves and blood ves-



sels, the flexion creases on the palmar surface, and so as to prevent herniation of the tendon from its sheath, a complication that occurs very promptly if the sheath is opened through the middle of the palmar surface of the finger.



Fig. 5. Lines of incision for drainage of the tendon sheaths.

On incising a finger with infection of the tendon sheath one is always surprised by the extensive swelling of the subcutaneous tissues, and by the manner in which they seem to fill the entire wound and obstruct the deeper structures from view. Unless this edematous tissue is well retracted it is impossible to secure a clear view of or even to expose the deeply lying tendon sheath. If one can expose the sheath for a little distance before opening it he will find, instead of a thin translucent membrane through which the shining tendon may be discerned, a grayish edematous structure which resembles the edematous peritoneum overlying an appendiceal abscess. The moment the sheath is opened the pus pours out. In very early cases the pus may not yet fill the sheath, and may appear only when the tendon is raised from the posterior surface of

its sheath, but this is an unusual occurrence.

If the flexor sheaths of the thumb and little finger are involved, the incisions must be extended upward. In the case of the thumb one should avoid cutting through the muscles of the thenar eminence by making a curved incision to the ulnar side of the thenar eminence (Fig. 5) and retracing the thenar muscles radialward; and one should remember that the flexor tendons of the little finger run obliquely upward and radialward and not in the line of the fifth metacarpal bone. Infection of the radial and ulnar bursae requires also an incision on the ulnar side of the forearm to drain the upper, most distensible portions of the ulnar and radial bursae. The incision should always be made at the side, never over the middle of the volar surface, for the pus lies underneath the flexor tendons. A median incision inevitably leads to extensive fibrosis and destruction of tendons and frequently to operative or post-operative injury of the median nerve.



Fig. 6. Line of incision for drainage of the middle palmar space.



The incisions for drainage of the middle palmar and thenar spaces are indicated in Figs. 6 and 7. In draining the middle palmar space the flexor tendons, digital nerves, and blood vessels of the middle finger should be retracted to the radial side and the corresponding struc-

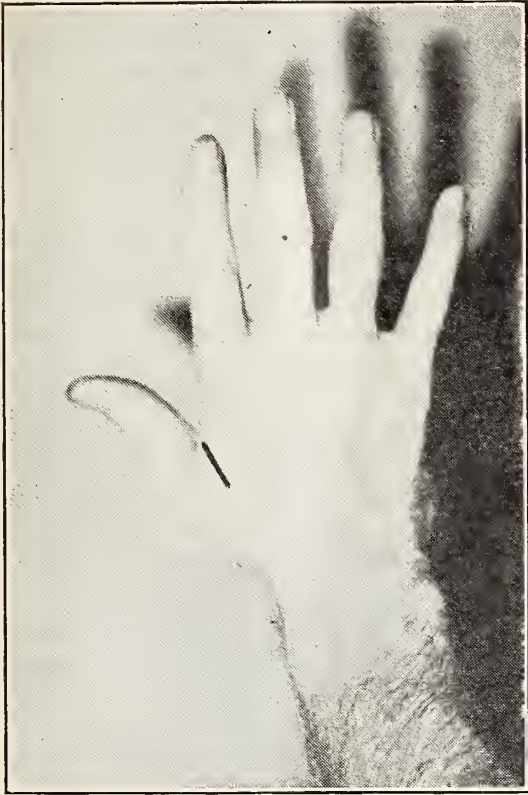


Fig. 7. Line of incision for drainage of the thenar space.

tures of the ring finger to the ulnar side so as to expose the space as it lies behind the flexor tendons. Occasionally an additional incision over the lumbrical canal of the ring finger helps to make drainage more complete and hasten recovery. Through the incision indicated for drainage of the thenar space a pair of forceps or Kocher dissector may be passed upward and ulnarward directly into the abscess cavity as it lies upon the adductor muscle of the thumb.

If drainage incisions are correctly located and of adequate length, an incision on one side of the affected fingers and on the ulnar side of the forearm, in the case of ulnar and radial bursa infections, suffices for drainage. The use of through and through drainage above or underneath a flexor tendon should be carefully avoided. It is the surest pos-

sible method of causing necrosis of the tendons.

With infections of the middle palmar and thenar spaces, drains should never be inserted through and through from the palm to the dorsum of the hand. The spaces in question are separated from the dorsal surface by a number of anatomical layers (Fig. 3). To plunge a pair of forceps through the deep volar fascia, the interosseous muscles, between metacarpal bones and through the dorsal aponeurotic and subcutaneous layers in order to drain an accumulation of pus in one of the fascial spaces of the palm is to show a complete disregard for the principles of surgical treatment and to render almost certain the development of osteomyelitis and the formation of persistent sinuses.

To stop oozing after operation and to keep wound edges widely separated drainage wounds are lightly packed with gauze impregnated with petrolatum. Occasionally rubber tissue is used instead. Tubes are never used because pressure necrosis of tendons and tendon sheaths and extensive fibrosis involving tendons and nerves inevitably result from their use.

In dressing the hand a large sterile towel is laid on the arm board, covered with abdominal pads and sterile dressings and the outstretched arm is laid on the bed of dressings. More dressings are added to cover the arm; the dressings are saturated with hot boric or salt solution and the edges of the towel brought together to enclose the whole. The hot solution or sterile water is added at two hour intervals without changing the dressing and a powerful electric light is suspended above the arm to help maintain the heat.

At the end of 24 hours the dressings are removed and a sterile dressing re-applied with the same care that was used in applying the original dressing. If one can avoid adding secondary infection, particularly to streptococcic infections of the tendon sheaths, the tendons may be saved and a complete restoration of function secured in a considerable proportion of cases (Garlock<sup>2</sup>).

The petrolatum gauze is removed at the first or second post-operative dress-



ing. No drainage material is reinserted after removal of the original drains.

As soon as the acute symptoms have subsided, usually at the end of three or four days, an arm bath, used for 15 or 20 minutes twice daily, is substituted for the continuous moist dressing. After being soaked in a hot sterile solution the arm is laid on a sterile towel, allowed to dry for a half hour under an electric light and covered with a dry dressing.



Fig. 8. Aluminum splint for maintaining the hand in the position of function during the period of healing.

While the hand is in the bath the patient is urged to move his fingers gently to prevent the formation of fibrous adhesions. Simply moving the fingers through their complete range of motion once or twice daily during the period of forced immobilization will suffice to prevent the formation of crippling adhesions. In addition to the dry dressing a light aluminum splint is applied to maintain the hand and fingers in the position of function<sup>3</sup> (Fig. 8). As soon as the danger of lighting up the infection has passed physical therapy and active

exercises are begun so that restoration of function may keep pace with the healing of the tissues<sup>4</sup>.

In neglected cases in which extensive contractures have been allowed to develop, often because of prolonged immobilization of the hand in a big moist dressing with the fingers extended and the thumb lying along side the fingers, considerable improvement may still be secured by the persistent use of physical therapy, of exercises designed to mobilize the affected fingers and of properly designed splints which bring elastic tension to bear on the contracted tendons and stiffened joints. Carefully planned operative procedures, designed to free the fibrosed tendons and nerves from the scar tissue which binds them to one another and to the surrounding tissues and to separate them from underlying bone and covering skin with thin flaps of fat, may be utilized in selected cases. Substitution of new tendons for tendons which have been destroyed and mobilization of ankylosed joints by excision of bone and interposition of thin flaps of fat will bring about a partial restoration of function in those unfortunate cases in which the hand is held immobilized in a vise of scar tissue.

#### SUMMARY

Acute lymphatic infections should be treated conservatively and operated upon only when there are unequivocal signs of pus formation.

Tendon sheath infections and infections of fascial spaces present definite and unmistakable diagnostic criteria. They should be carefully and adequately drained as soon as the diagnosis is made. In the post-operative care the prevention of secondary infection, early mobilization and the maintenance of the hand in the position of function during the period of enforced immobilization are important details of treatment.

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**Nephrolithiasis**

W. J. ALDRICH, M.D.

Read before Montgomery County Medical Society, November 18, 1927.

One day last July a lady called upon me, complaining of pain in the back on the right side in the region where the kidney lies. This pain had begun about three years ago and had been quite constant, and at times so severe as to require opiates. My first thought was the kidney.

On palpation, when a deep breath was drawn, I was able to grasp the kidney, and its position and size were normal. I asked for a specimen of the urine and the next day she brought in a four ounce bottle which looked thick and full of pus. After settling only half an inch of clear urine appeared at the top of the test tube. It was alkaline in reaction and the microscope showed pus in abundance.

On the following day I had the kidney x-rayed and several kidney stones were plainly seen. On July 18, at the Mercy Hospital, I made an opening in the lumbar region and brought the kidney up for examination. Its outer appearance presented nothing unusual. The shape, color and size were substantially normal. But on palpation several hard masses were felt in the cortex, scattered from end to end.

Opening the kidney by a longitudinal incision, several of the stones were exposed and removed. Other stones lying in different planes were cut down upon and removed.

On account of the extensive mutilation of the kidney tissue necessary to reach and remove all the stones it seemed unwise to leave the kidney, so it was removed.

Her recovery has been complete, and the remaining kidney is excreting a urine normal in every respect. She has gained back to her normal weight, her color is good, she eats well, sleeps well and has every promise of future health and comfort.

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Mistress: "Can you explain why it is, Mary, that every time I come into this kitchen I find you reading?"

New Maid: "It must be those rubber heels of yours, mum!"—Passing Show.

**KANSAS MEDICAL LABORATORY ASSOCIATION****Bile Tests on Blood**

MARTIN DUPRAY, M. S., Hutchinson

As the knowledge of the physiology and chemistry of jaundice has increased, bile tests on the blood have assumed increasing clinical importance. The following outline has been abstracted from various sources and correlated by some experience, and is presented here as an addition to clinical laboratory technique.

Blood for the tests is best drawn from a vein. A Keidel tube is satisfactory, or a syringe may be used. If by syringe, care must be taken to have the syringe and the container into which the blood is put, both dry, or else rinsed in physiologic salt solution to prevent hemolysis. A drop or two of water in either syringe or container may cause a little hemolysis, which will interfere with the tests, especially the Muelengracht which may then be impossible. Allow blood to clot and separate clear serum for the tests.

*Muelengracht. Icterus index.* Quantitative.

Standard. Potassium bichromate, 0.1 gram; distilled water 1000 cc.; Conc. sulphuric acid, 3 or 4 drops.

Use Sahli hemoglobinometer or similar instrument. Place the standard bichromate solution in one tube. In the other tube place 1 cc. of clear serum. Dilute carefully with distilled water until the color of the test matches the standard solution, carefully keeping track of the number of cc. of water used. The number of cc. of water required gives the dilution, or the "icterus index." An index of 5 or less is normal. Above 5 is abnormal. The normal index corresponds to the normal bile content in the serum of 1:600,000 or 1:500,000.

A rising icterus index in successive tests indicates a poor surgical risk.

*Van den Bergh test. Direct.*

Place 1 cc. of blood serum in a small test tube and add 0.25 cc. of Ehrlich's diazo reagent and mix. A positive reaction is shown by a violet or pink color. If color appears at once, report as "immediate positive." If color appears after more than one minute, or even after some time, report as "delayed positive." No



color, or a very faint pink after a half hour, report negative.

*Van den Bergh test. Indirect.*

Place 2 cc. of alcohol in a centrifuge tube. (C. P. methyl alcohol may be used in place of grain alcohol if desired). Add 1 cc. of blood serum, mix, and centrifugate. Place 1 cc. of the supernatant liquid in a small test tube, and add 0.25 cc. of Ehrlich's diazo reagent and mix. A positive reaction is shown by a violet or pink color, which usually appears at once. (If an orange buff color appears, see "Diazo reaction in uremic serums").

DIAZO REAGENT

Solution A. Sulphanilic acid 2.5 gm., Conc. hydrochloric acid 25 cc., distilled water 500 cc.

Solution B. Sodium nitrate 0.5 gm., distilled water 100 cc.

Working solution. 25 cc. of Solution A and 0.75 cc. of Solution B. Mix fresh each time used.

*Interpretation, Van den Bergh tests.*

Both of the Van den Bergh tests depend upon the production of azobilirubin. With pure bilirubin in alcohol the test is sensitive to bilirubin as dilute as 1:1,500,000. The presence of serum proteins and other substances reduces this considerably, probably as low as 1:500,000 in the direct test. In obstructive jaundice there is very little, or unstable, combination of the bilirubin with other substances, and the direct test gives an "immediate positive." In non-obstructive jaundice the combinations are more stable and break up slowly in the test, giving with the direct test either "delayed positives" or negatives. In the indirect method, the combinations are broken up by the alcohol and the test gives positives at once. Therefore, an "immediate positive" with the direct and a positive with the indirect indicates obstructive jaundice, while a "delayed positive" direct, or even negative direct, and a positive indirect indicates non-obstructive jaundice.

*Fouchet test.*

Reagent. Trichloroacetic acid 5 gm., distilled water 20 cc.,

10 per cent ferric chloride solution 2 cc.

Mix two or three drops of the reagent and an equal amount of blood serum on a white porcelain surface. Gives a green

color with bilirubin by oxidation to biliverdin.

This test is not sensitive to less than 1:60,000 bilirubin and does not react with normal bloods, as this amount is only encountered in frankly jaundiced serums. The test fails with many mildly jaundiced cases. The test, however, is specific for bilirubin. It is a valuable adjunct to the Muelengracht in proving whether high colors observed in the latter are due to bilirubin or to hemoglobin. It may also be used as an adjunct to the indirect Van den Bergh, in that in some cases of non-obstructive jaundice the combination of the bilirubin may resist breaking up by alcohol, while such combination seldom resists the Fouchet. A negative or "delayed positive" direct Van den Bergh and a positive Fouchet indicate non-obstructive jaundice, the same as with a positive indirect Van den Bergh, even though the latter is actually negative.

W. W. Hall has pointed out that azobilirubin is more soluble in alcohol than in bilirubin. Also that in the indirect Van den Bergh some bilirubin may be carried down with the precipitate. To overcome this he has modified the indirect Van den Bergh as follows.

Place 1 cc. of blood serum in a centrifuge tube and add 0.5 cc. of diazo reagent and mix. After one or two minutes add 2.5 cc. of alcohol and 1 cc. of saturated ammonium sulphate solution, mix and centrifugate. Observe the color in the supernatant liquid. A positive reaction is shown by a violet or pink color as before.

*Diazo reaction in uremic serums.*

Carried out in the first stage as the indirect Van den Bergh test for bilirubin, and was discovered in the course of such tests.

If, instead of the violet or pink color of azobilirubin, in the indirect Van den Bergh, an orange buff color appears, gradually deepening, make the test alkaline with NaOH solution and observe closely at once. A positive is shown by a cherry pink color quickly appearing and fading in a few minutes. (Azobilirubin would give a green color). The chemistry of the test is not now known.

Andrewes found this test given only by uremic patients, usually only grave

cases, and usually only those with 200 mg. or over of urea per 100 cc. of blood. The test has some value as an aid in differentiating uremic coma cases from other comas. Always a grave prognosis.

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## UNIVERSITY OF KANSAS CLINICS

### Infections of the Upper Respiratory Tract

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Inasmuch as infections of the upper respiratory tract are very prevalent during the autumn, winter and spring months, it is desirable to accept every opportunity to further our knowledge of the etiology, prophylaxis and treatment of such infections.

By infection is meant the implantation into the tissues of living, disease producing organisms in such a way as to favor their growth and to permit their toxins to injure the tissues.

Before proceeding with this discussion, a short review of the anatomy and functions of the nose and throat, as they pertain to the prevention of infections, would not be amiss.

In studying the anatomy of the nose, the first thing that we note is that the anterior portion of the nose is filled with fine hairs or vibrissae which have a distinct function. Next, the mucous membrane of the nose is of the ciliated columnar epithelial type; third, that the inferior turbinates have the power to contract or hypertrophy according to the exigencies of the case. Another important thing to remember is that the mucous membrane of the nose secretes about a quart of water<sup>1</sup> every twenty-four hours.

Of the three functions of the nose (olfactory, vocal and respiratory) the respiratory, which includes the warming, moistening and filtering of the inspired air is of the greatest importance to us

from the standpoint of infections. For instance, when air is inspired, and incidentally we inspire from 10,000 to 20,000 quarts a day, the coarser dust particles and a large number of the organisms become entangled in the vibrissae and are expelled before reaching the mucous membrane. Most of the remaining organisms become enmeshed in the secretions of the mucous membrane, are destroyed, and expelled by the cilia of the columnar epithelium. At the same time air is moistened and warmed for its entrance into the lungs. This is no small task for the nose to perform when it is remembered that we inhale into the nose from 1,000 to 14,000 organisms every hour, the number varying of course with our environment.

The pharynx, with its stratified squamous epithelium is not nearly so well prepared to handle inspired air, hence it is essential for the best interest of the patient to correct any condition in the nose that interferes with proper aeration and drainage.

The prevailing organism in upper respiratory tract infections is the streptococcus, hemolytic, non-hemolytic and viridans. The staphylococcus, pneumococcus, micrococcus catarrhalis and diphtheria bacillus are frequently encountered, and rarely the bacillus coli, proteus, influenza and diphtheroid.

The contributing factors which enter into the production of upper respiratory infections may be divided into three groups:

1. Contact with one harboring an infection, and combined with contact there is usually a lack of knowledge of hygiene and prophylaxis on the part of one or both parties concerned.

2. Lowered resistance on the part of the host.

3. Deformities or growths in the nose and throat.

It is not necessary to call to the attention of a group of physicians the role that contact plays in the production of these infections. This is common knowledge to all of us. Nor is it necessary to discuss hygienic and prophylactic measures such as isolation of the patient in so far as it is practical, the individual drinking glass, separate towels and other



linen, the covering of the nose and mouth when sneezing and coughing, the collection of secretions from nose and mouth on cloths which are subsequently sterilized or burned and so on. All of these measures are well known to the physician, but this knowledge is not shared by the average layman.

The duty of the physician, then, in this first factor is education of the public to the necessity of observing these rules. This may be accomplished both individually and collectively. In recent years much valuable information along these lines has been given to the laity by the physician through the press and by public speaking. A few moments should be devoted to each patient coming under one's observation with a nose or throat infection, instructing him as to the prophylactic measures that should be followed in his particular case, and, if necessary, written instructions should be given. One is surprised at the lack of knowledge or carelessness manifested in these matters by individuals who are of more than average intelligence.

The second contributing factor in the production of upper respiratory infections, namely, lowered resistance, brings to mind several interesting facts.

1. Most of us harbor at all times a few pathogenic organisms in the nose, nasopharynx, tonsils or trachea which await a favorable opportunity for their growth. This opportunity presents itself when some condition arises which temporarily lowers the resistance of the individual. Among the commoner conditions which lower resistance may be mentioned, rapid changes in temperature, fatigue or exhaustion, lack of proper exercise, exposure to cold or wet, poorly ventilated sleeping or living rooms, lack of moisture in inspired air, overeating, constipation, etc. In handling this group of cases, educational as well as therapeutic measures, will again be necessary.

Under the third contributing factor, deformities or growths, may be mentioned, deviated septums, septal spurs, hyperplastic turbinates both inferior and middle, nasal polyps, and lymphoid hyperplasia in the nasopharynx and oropharynx.

Deformities or growths in the nose almost always serve to prevent proper aeration and drainage. This condition leads to catarrhal changes in the nasal mucosa which render it more susceptible to pathogenic invasion. Hyperplastic tissue in the nasopharynx and oropharynx is always less resistant to infection than the normal pharyngeal mucosa. Incidentally, I believe that the tendency to lymphoid hyperplasia is an inherited one in a great many cases, therefore, we have more frequent recurrence of adenoid growths in some children than in others; also, hyperplastic pharyngitis and lingual tonsil hypertrophy in both adults and children may be accounted for in the same way.

The symptomatology of acute upper respiratory infections may be grouped under four headings.

1. Fever, with general malaise.
2. Aching of the head, back and limbs.
3. Gastro-intestinal disturbance with constipation.
4. Local manifestations.

It matters not whether one has an acute rhinitis, nasopharyngitis, tonsillitis or tracheitis, the above symptom complex will be present. The fever may vary from one to seven degrees according to the virulency of the disease. The aching of the head, back and limbs may be very mild or of an unusual severity. The gastro-intestinal symptoms vary from mild nausea to excessive vomiting. We must depend a great deal upon the examination of the nose, throat and trachea and their local reactions in arriving at a correct diagnosis.

It goes without saying that in diagnosing these infections valuable assistance is rendered by the bacteriologist.

The most frequent diseases encountered in upper respiratory infections are acute rhinitis, naso-pharyngitis, tonsillitis and tracheitis.

Diphtheria must be mentioned here since it is the most treacherous of these infections; but with the introduction of diphtheria toxin-antitoxin mixture this disease is being rapidly relegated to the sidelines.

The larynx, while occupying a very prominent place in the upper respiratory



tract seems to be quite resistant to acute infections.

The complications following infections in this region are many, among which may be mentioned sinusitis, otitis media, mastoiditis, bronchitis, arthritis, neuritis, nephritis, endocarditis and myocarditis.

The treatment of all acute upper respiratory infections may be outlined as follows:

1. Catharsis.
2. Alkalinization.
3. Salicylates.
4. Local applications.
5. Miscellaneous.

Under catharsis let us mention first, small broken doses of calomel, followed by an alkaline cathartic, such as citrate of magnesia, epsom salts, etc.

For alkalinization, sodium citrate in children and sodium bicarbonate or citrate in adults, will prove entirely satisfactory.

The salicylates are used for three reasons. They are antipyretic, analgesic, and they inhibit bacterial growth. Large doses are recommended at times. For instance, thirty grains of sodium salicylate may be administered intravenously **every few hours** if necessary in severe cases. Acid acetylo-salicylic is a very valuable derivative of the salicylic acid group.

As to local applications, they vary with the location of the infection.

In acute nasal infections the use of the colloidal silver preparations in 10 or 15 per cent solutions, placed in the nose on cotton tampons, for a period of fifteen to thirty minutes, has proved a treatment par excellence. Two results are obtained. 1. The prolonged contact of the solution with the infected mucosa has a certain germicidal effect which we cannot get by spraying. 2. An exosmosis results so that upon removal of the tampons large quantities of mucus or mucopurulent material can be expelled from the nose with very noticeable relief to the patient. There is considerable doubt as to whether sprays have any value other than a slight mechanical cleansing.

Of the colloidal silver preparations on the market, the writer prefers neo silvol

which makes a yellowish milky solution, is non staining, is much better for the physician to handle and is just as effective in the nose as any of the other preparations. They should be obtained in capsule or tablet form and made up fresh.

The removal of the tampons from the nose may be followed by a spray of ephedrine sulphate or hydrochloride in 3 per cent solution. This drug is known under the trade name as Fedrin, and is as you know, derived from the Chinese plant ma huang. Its action is similar to that of epinephrine, but more prolonged, and with no unpleasant reactions following.

It is very desirable, at all times, in acute nasal infections to promote drainage and aeration, and especially is this true in sinusitis. I know of no other drug on the market today that accomplishes this as thoroughly as does Fedrin.

In inflammations of the nasopharynx a 4 or 5 per cent mercurochrome applied on a curved applicator through the mouth has given good results. This solution must also be kept fresh as experiments have shown that after a few days it rapidly loses its strength.

Silver nitrate is not well tolerated in the nasopharynx, but is the application of choice in the oropharynx and to the tonsils. It is used in solutions varying from 25 per cent to saturated solution.

Of the gargles, a saturated solution of potassium chlorate has proved the most satisfactory in all conditions, especially tonsillitis, Vincent's angina, and syphilis. Gargles will be much more effective if held in the mouth for a period of three or four minutes rather than a few seconds.

To apply or inject solutions into the larynx or trachea requires some special training, but this method is quite effective in quieting an acute inflammation and relieving a troublesome cough. One of the favored solutions is menthol, guaiacol and camphor, 5 gr. each in an ounce of liquid albolene. This is injected into the trachea in 2 cc. doses. Much may be accomplished in infections in this region by steam inhalations into which

has been placed a small quantity of analgesic balm.

Under the heading of miscellaneous treatment must be mentioned diphtheritic and streptococcic antitoxin, vaccines, ultra violet light therapy and in laryngeal involvement the administration of codeine or heroin to control a stubborn cough. Time will not permit the discussion of these things, although a number of interesting points might be brought out.

In dealing with chronic infections of the nose and throat, operative procedure is quite often necessary. However, in the lymphoid hyperplasia in the pharynx a great deal may be accomplished by the use of the ultra violet lamp and the administration of vitamine-containing preparations, such as cod liver oil, etc.

Before concluding, permit me to mention the striking results that have been obtained in the prevention of diphtheria in Kansas City by the introduction into the schools of diphtheritic toxin antitoxin. During the five years previous to 1925 there was a yearly average of 550 cases of diphtheria reported from September until June. During the autumn of 1925 a large number of children in the schools were given the toxin-antitoxin. From September to June there were only 107 cases of diphtheria reported; a reduction of almost 80 per cent.

In summarizing let me call your attention to the contributing factors in upper respiratory infections; contact, lowered resistance and deformities or growths; to the symptom complex, fever, aching, gastro-intestinal disturbance and local manifestations; to simplified but vigorous therapy, and lastly to emphasize the necessity of educating the public to the importance of prophylaxis in these infections.

1. Sir St. Clair Thompson; Diseases of Nose and Throat, P. 7-8.

—————R—————

Suitor: "Mr. Perkins, I have courted your daughter for fifteen years."

Perkins: "Well, what do you want?"

Suitor: "To marry her."

Perkins: "Well, I'll be damned. I thought you wanted a pension or something."—Wall Street Journal.

## Health, Dietetics, Sanitation, Sewage

### THE PRODIGAL

In ev'ry clime, in ev'ry age  
 "Health is wealth," or so said the sage.  
 Since time began, since Adam's fall  
 By eating apples, core and all,  
 Apples that Eve poached from the tree  
 They had been warned they must let be;  
 At any rate that time is fixed  
 At which the rules of health got mixed.  
 Perhaps the cores got stuck somewhere  
 Perhaps hard cider formed in there,  
 For Adam's belly ached and that is why  
 He thought he had to tell a lie;  
 To save his face and stay within the gate  
 He put the blame on Eve, his mate.  
 And thus the first complex inferior  
 Was born in Adam's soul, or his interior.

In order that both life and health be  
 spared

Old Moses had a diet list prepared.

He told his people what to eat and how  
 prepare

The bullocks, goats and other fare;  
 And then cleanliness was his text  
 For that, he said, to Godliness was next;  
 To make a nation grow, to make it rise,  
 To make its people healthy, wealthy,  
 wise.

So Moses followed Nature's lead  
 And added health laws to his creed.  
 Made long ago those laws are still re-  
 tained,

Have nothing lost but in importance  
 gained.

With water douche and wash and scrub  
 And redden the skin with a friction rub.  
 "For cleanliness comes first," said he,  
 "In all rules of health, wherever you be."  
 In working, in resting, also in sleep,  
 Of fresh air take plenty, its always cheap.  
 For the disposal of sewage there's air  
 and earth

For refuse and filth and things of no  
 worth;

Things that won't burn but seem to seep  
 Cover with earth and bury deep.

This we must do and build a shrine,  
 These things are naught without sun-  
 shine.

Thus earth, air, water, fire, sunshine  
 Are Nature's sanitary tools and thine.



# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - Editor**

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### HOSPITAL EFFICIENCY

The medical profession has been fairly unanimous in its support of every plan that had for its object the improvement or the increase in scope of the service it can render the people. It has co-operated with groups of its own members, with public health groups and with lay organizations in whatever efforts were made toward that end.

When a movement was inaugurated to standardize the hospitals the medical profession readily lent its support and did whatever was required toward accomplishing the purpose. Some of the requirements imposed considerable extra labor on the members of the hospital staffs, but no complaints have been made on that account. There has been some improvement in the hospitals and the effort at standardization seems to have been worth while. But sufficient time has now elapsed to properly evaluate the innovations then introduced, and it is fair to seek for data upon which to estimate the actual value to the hospital or to the public of some of the regulations generally adopted.

One of the most essential features of a standardized hospital is an organized staff. The organization of these staffs, particularly in hospitals where there had previously been none, naturally led to some confusion, and in occasional instances the hospital has suffered from lack of harmony among those selected, especially when the appointments were made by boards of laymen. In some of the smaller cities, where there are three or four hospitals, the same group of men constitute a majority on each staff, a situation very certain to complicate some of the problems likely to arise in any hospital. In one little city of 20,000 that has three or four hospitals the matter was taken up by the county society and it was agreed that no one man should hold a staff appointment in more than one hospital, but all members of the county society should be admitted to all of the hospitals. This proved to be a very satisfactory arrangement and there has been no friction between the hospitals or between the members of any staff.

The necessity for, or, at any rate, the advantage of having an organized staff in every hospital seems to have been pretty well demonstrated, when the staff has been selected with judicious foresight and when the value of its advice and counsel is recognized by the board of managers. There are instances, however, where the composition of the staff so inhibits the free discussion of matters of particular interest to one hospital that it is a menace rather than an aid to progress. It is obvious that the voting staff should be so composed that the most intimate affairs of the hospital and its most perplexing problems may be discussed by it with the utmost freedom and confidence. Otherwise there can be no profitable co-operation between the governing board of the hospital and its staff.

Another of the essential features of the

standardization plan calls for regular, at least monthly, meetings of the staff. If the purpose of these meetings is to improve the efficiency of the hospital and they are conducted in accordance with that purpose, the time and energy expended on them is well repaid. Presumably the purpose of these meetings is to discuss the perplexing problems in the diagnosis and treatment of cases in the hospital, and particularly to review the records of cases on file and endeavor to bring out such facts in the history or findings as may be necessary to clarify the records and make them intelligible to those who may at some future time desire to consult them. To do these things properly will consume considerable time, but it will be time well spent, and the results will soon be manifested in the efficiency of the staff and the reputation of the hospital. Unfortunately this purpose has been lost sight of in the staff meetings of a good many hospitals. In some of these hospitals the members simply present reports of interesting cases they may have, or may have had in the hospital; and these cases are then discussed by other members of the staff who have been called in consultation or have assisted in some manner in the treatment. On the whole, the meetings are conducted much after the plan of a medical society meeting, the only apparent difference being that in reporting a case at a staff meeting some attempt is made to use the hospital records. But so many explanations and so many interpolations seem to be necessary that the report is neither interesting or instructive to any but those who have been associated in the case. These reports do bring out very forcibly one important fact. When one who has prepared the record in a case finds it necessary, when reporting that case to the staff, to make frequent explanations and interpolations of data and findings, it is obvious that he himself must recognize

the incompleteness of the record he has placed in the hospital files. But nothing is done about it.

Except for the fact that membership on the staff is usually contingent upon regular attendance of its meetings there would seldom be many there. Staff meetings should be conducted for the benefit of the hospital and its staff, for the discussion of such matters as have to do with the hospital's efficiency. Otherwise they should be abandoned for in any case they detract considerably from the interest in the meetings of the county medical society.

Granting that an organized staff, regular meetings and complete hospital records are essential to any well conducted hospital, there are other requirements of the standardization plan that seem to be superfluous, at least they might be regarded as unnecessary red tape. The following is quoted from a special article by Dr. M. L. Harris on medical economics that was published in the *Journal of the American Medical Association*, November 27.

"It should be the duty of all physicians who are actively concerned with hospital work to see that the primary purpose of the hospital—namely, the care of the sick—is not diverted or minimized by the prevailing passion for so-called standardization, which seems to have obsessed so many organizations and institutions today. Hospitals are being flooded with elaborate questionnaires, some of them asking questions which no self-respecting institution would answer, such as the names and salaries paid its superintendent and other employees, and the names and particular religion of the members of the staff, and are being overrun by young inspectors who have no knowledge of, or experience in, the management of hospitals, each with an arbitrary yardstick with which to measure and rate the hospital according to the dominant idea of the institution doing the rating. One will rate the hospital on the basis of its physical equipment; another on its scien-



tific paraphernalia; a third on the percentage of autopsies held on the dead; a fourth on the number of beds and its facilities for training interns; a fifth on the willingness of the members of the staff and all others practicing in the hospital to sign an iron-clad stultifying oath concerning fees, which it is acknowledged cannot be enforced and which, as is well known, is constantly being violated by a large percentage of its own members, and so on down the list, while no one seems to have grasped the idea of rating hospitals according to the amount of good they are doing in the relief of human suffering, having in mind the economic conditions of the community served."

No doubt there are states in which the oath referred to may, at least with a large per cent of those who subscribe to it, control the division of fees. It is of course unnecessary in Kansas where the legislature has already made this practice an offense against the law. Nevertheless the physicians of the state have found no objection to this or any other requirement if the interests of the hospitals could be to any degree promoted thereby.

If hospital standardization will accomplish any improvement in the service these institutions can give the people, by all means let us have it, but why should they be supervised by any organization without some authority to enforce its regulations. It would seem more appropriate for an association of hospitals to undertake such a task. On the other hand, since it is the welfare of the people primarily concerned, it would seem the logical thing for the state legislature to provide for a hospital commission to promulgate and enforce whatever regulations are required. For after all, the rating given the hospitals in this state by the doctors or the people of Illinois, New Mexico or Alaska, is not nearly of so much importance as the character of the service given by them to the doctors and the people of Kansas.

## CHIPS

Man is said to be a reasonable being. Experience shows that man is capable of being a reasonable being.

To prevent taking cold, Cant, the great philosopher, when out in bad weather, would not talk but kept his mouth shut and breathed through his nose. It might be a good habit to popularize. It would at least prevent a lot of gossip.

The bland, tasteless mineral oil that is inert and used promiscuously to lubricate the alimentary canal and relieve constipation, is now accused of being a solvent of vitamine A.

When a medical man is asked by a stranger, "What is your profession?" the answer should be "I am a physician." The term physician describes your calling. Doctor is only a title that can be earned by men of various callings and means nothing in the description of your work.

It has been shown that most accidents occur in factories at about 10 a. m. and 3 p. m. By recessing ten minutes at these hours and giving each worker a pint of milk, the number of accidents has been lessened fifty per cent in the factories adopting the plan, and it also increased production. If this plan adds to the safety of factory workers why not apply it to strenuous workers of all classes.

A layman, in an article in defense of vegetarianism, published in a popular health magazine, makes the following statement: "At least two-thirds of the meat eaten by a mixed feeder is eliminated by the kidneys as waste matter serving no useful purpose. Meat contains much uric acid which must be eliminated if life and health are to be maintained."

As the result of some observations, Kawai Suzue concludes that there is more or less of an antagonistic disposition of carcinoma and sarcoma to arteriosclerosis, while carcinoma and tuberculosis stood closely connected with each other. There is also a close relation between liver carcinoma and hepatic cirrhosis.

A new analgesic for painless childbirth has been reported as being successful in

ninety per cent of 15,000 cases on which it has been used. It is an emulsion of ether, oil and quinine which is injected. It is claimed that the patient remains conscious during delivery but is free from pain.

Cows may become infected with human tuberculosis according to a report which is credited to the University Control Service of Nevada. Laboratory tests showed that the cows were infected with "tuberculosis germs of distinct human type."

A statement is reported to have been made at the recent meeting of the Medical Society of Southern California, to the effect that high blood pressure caused one out of every three deaths. Of course that was an assertion rather than a statement of fact and yet it seems strange that it would go unchallenged in a meeting of scientific medical men.

In an article on place-in-family as a factor in disease, *Lancet*, Oct. 15, still presents an analysis of a considerable number of cases tending to show that the first pregnancy carries with it more risk than a later pregnancy of certain affections in the offspring which are due to perversions of development and a greater liability to the production of congenital abnormalities. In 280 cases of congenital heart disease 35 per cent were in first born; of 450 cases of mental deficiency, not mongols, 40 per cent were in first born; of 160 cases of congenital abnormalities 40 per cent were in first born and in 120 cases of epilepsy 40 per cent were in first born.

The various theories advanced for the cause of sea-sickness are questioned by Oriel, *Lancet*, Oct. 15. He believes the findings in a very large number of cases observed prove that there is a metabolic upset which is shown in the pre-vomiting stage by a hyperglycemia followed by a hypoglycemia, an increased ammonia excretion and the presence of acetone in the urine. When vomiting is established there is a very severe acidosis as indicated by excretion of ammonia up to 265 mg. per cent and the presence of much acetone and diacetic acid in the urine. The administration of glucose causes

diuresis, abolition of acetonuria and a fall in ammonia excretion, with relief of symptoms. Passengers who eat freely of fruits and carbohydrates and avoid fats are never violently sick.

A number of cases of hyperthyroidism that were treated with injections of absolute alcohol are reported by Collier and Barker in *Archives of Surgery*, December 27. In most of the cases the operative risk was considered poor before the treatment. All but one of the patients showed marked symptomatic improvement. They conclude that alcohol injections can be given without harm to the patients. It causes an initial coagulation necrosis, followed eventually by replacement of thyroid tissue by fibrous tissue. The local and general reactions are slight. The improvement in the patient's condition depends upon the amount of gland destroyed by the alcohol. The procedure is not intended to replace subtotal thyroidectomy, but may be used where all other methods have failed to make a good operative risk.

Some recent experiments to determine the effects of camphor, strychnine and caffeine on cardiac output are reported by Wilson, Harrison and Pilcher, in the *Archives of Internal Medicine*, November '27. Their results seem to show that neither camphor or caffeine has any value in the treatment of patients with disturbances of the cardiovascular system, and the value of strychnine in such conditions is doubtful, or at least unproved. Camphor has no constant effect in increasing cardiac output; caffeine produces no change with small doses, but causes a diminution when given in large doses; strychnine, in therapeutic doses increases cardiac output, but increases the consumption of oxygen to a greater degree than the cardiac output, and thus increases the demand for blood to a greater extent than it increases the flow.

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#### MEDICAL SCHOOL NOTES

Dr. Edward H. Hashinger addressed the Labette County Medical Society, Parsons, Kansas, on Wednesday, November 23. Subject discussed "Aortitis."

Mr. Wm. Morgan, member of Board of



Regents, visited the Hospital December 3, 1927.

Dr. Kenneth Davis, class of '25, was recently married.

Dr. Thomas G. Orr read a paper on Thrombo-Angiitis Obliterans at the meeting of the Rock Island Surgeons in Omaha, December 8.

Dr. Thomas G. Orr attended the meeting of the Western Surgical in Omaha, in December.

Dr. F. C. Helwig has recently been appointed Pathologist of the St. Luke's Hospital, Kansas City, Missouri.

Dr. Fay Boys '25, who is interning at Cincinnati General Hospital, Cincinnati, Ohio, recently visited the Hospital.

Dr. S. A. Queen, Professor of Sociology, recently visited the Bell Memorial Hospital and Out-Patient Department with the idea of establishing a Social Service Branch to the Clinic.

Work is now being started on the second floor of the new Nurses' Home and the Hospital Unit.

Dr. and Mrs. Damon Walthall are the proud parents of a baby girl, whom they have named Barbara Ann.

Dr. L. P. Engel, Associate Professor of Surgery, was elected to membership in the Western Surgical Association at its recent meeting in Omaha, Nebraska.

Dr. Claude Hunt '15 was elected to membership in the Western Surgical Association December 9th, 1927.

## —R— SOCIETIES

### MIAMI COUNTY SOCIETY

At the last meeting of the Miami County Medical Society, held at the office of Dr. O. C. Lowe in Paola, December 13, the following officers were elected for the ensuing year: President, Dr. P. F. Gately, Louisburg; Secretary-Treasurer, Dr. J. W. Kelly, Louisburg; Censors, Dr. L. A. VanPelt and O. C. Lowe of Paola, and Dr. Joseph Fowler of Osawatimie. The date of meeting of the Society has been changed from the last Thursday to the second Tuesday of each month.

The society is taking on new life and much interest has been shown during the year just closed. The next meeting will be held on Tuesday, January 10, at the office of O. C. Lowe, Paola. At the next meeting the subject of "Wrist Fracture" will be discussed by Dr. O. C. Lowe and "Vertebral Fractures" by Dr. A. W. Fairchild.

J. W. KELLY, Secretary.

### RILEY COUNTY SOCIETY

Following the dinner at the Gillett Hotel the Riley County Medical Society was called to order by Dr. W. M. Reitzel, who was elected temporary chairman in the absence of both the President and Vice President.

Minutes of the previous meeting were read and approved.

Under the head of communications a transfer of Dr. R. G. Schoonhoven's membership was read. It was moved and seconded that the transfer be placed on file of the Society and Dr. Schoonhoven accepted as a member. Motion carried.

Dr. Groody not being present to furnish the scientific paper at this time the Society turned to the head of new business which included the election of officers and the following officers were elected for the year of 1928 by an unanimous vote of the Society:

Dr. W. M. Reitzel, President.

Dr. G. A. Cassidy, Vice President.

Dr. R. G. Schoonhoven, Secretary and Treasurer.

Dr. J. R. Mathews was elected to the Board of Censors to fill the vacancy created by the expiration of Dr. C. M. Siever's term.

The Board of Censors reported favorably on the application for membership of Dr. Barrett A. Nelson. Dr. Nelson was voted into the society by an unanimous vote.

The applications for membership of Dr. Waller and Dr. Cave were referred to the Board of Censors.

An auditing committee consisting of Drs. Bressler, Mathews and Schoonhoven were appointed by the President to report at the next meeting.

It was moved and the motion carried that the meeting time be changed from the second Monday to the first Monday in each month.

The following members were present: Drs. Groody, Bressler, Mathews, Schoonhoven, Cassidy, Cave, Colt, Sr., Colt, Jr., McFarlane, Siever and Reitzel.

A paper on "Salivary Calculi" with two case reports was read by Dr. H. T. Groody and discussed by the members present.

J. D. COLT, Jr., Secretary.

#### BOURBON COUNTY SOCIETY

The Bourbon County Medical Society met at the Goodlander Hotel for an annual banquet, which was deliciously prepared and immensely enjoyed by all present.

A motion was unanimously carried that the present officers hold over for another year.

There were forty-one physicians present, twenty-seven of these being from out of the county.

After the banquet the following program was presented: Dr. Rupe of St. Louis gave a very interesting talk on "Otitis Media in Children." Dr. John H. Ogilvie of Kansas City gave a very interesting lecture on "Hyperthyroidism" which showed considerable effort in preparation and recounted many case histories. After a thorough discussion of these papers we listened to our old friend, Dr. C. C. Conover, on "Cardiovascular Diseases." It is always a treat to hear Dr. Conover and this lecture was no exception. A free discussion followed which was very instructive.

All expressed themselves as highly pleased with the splendid program put on by the able speakers mentioned above.

W. S. GOOCH, Secretary.

#### CLAY COUNTY SOCIETY

The regular meeting of the Clay County Medical Society was held in the sun room of the Clay Center Municipal Hospital on December 14, 1927, at 8 p. m.

The meeting was called to order by the president, Dr. C. C. Stillman, of Morganville.

It was moved by Dr. E. N. Martin and seconded by Dr. R. J. Morton that the society go on record as favoring a pre-school clinic to be held in Clay Center some time in February, 1928.

Dr. Wm. Menninger of Topeka spoke on "The Research at St. Elizabeth's Hospital, Washington, D. C., with Special Reference to the Malarial Treatment of Neuro-syphilis."

Dr. D. O. Jackson of Wakefield presented an interesting case to the society for observation and discussion.

Dr. Arthur D. Gray of Topeka spoke on "Prostatism."

December being the month of the annual meeting, it was necessary to elect officers for the ensuing year. Dr. C. C. Stillman of Morganville was re-elected president, Dr. D. O. Jackson of Wakefield was elected vice president, Dr. X. Olsen of Clay Center was elected secretary, Dr. F. R. Crosson of Clay Center was elected treasurer, Dr. Carr of Junction City was elected censor and Dr. C. C. Stillman of Morganville was chosen to represent the County Society at the state meeting with Dr. D. O. Jackson chosen as alternate delegate.

Among the visitors were five medical officers from Fort Riley and Dr. Wm. Bowen of Topeka.

F. R. CROSSON, Acting Secretary.

#### SALINE COUNTY SOCIETY

The Saline County Medical Society held its regular monthly meeting December 7, at the spacious new home of its president, Dr. C. M. Fitzpatrick, Salina.

The members of the society were the invited guests of Doctor and Mrs. Fitzpatrick to a sumptuous four course turkey dinner. Twenty-six of the thirty-two members of the society were present.

After the dinner, the regular business of the society, including the election of officers for the ensuing year, was transacted.

The following officers were elected: President, Dr. E. J. Lutz; Vice President, Dr. Earl Vermillion; Secretary, Dr. Leo Schafer; Treasurer, Dr. H. E. Neptune; Censor, Dr. C. M. Fitzpatrick; Delegates to the State Medical Society, Dr. C. M. Fitzpatrick and Dr. E. G. Ganoung.

The program of the evening was given by Dr. O. R. Brittain. Dr. Brittain first gave a very interesting and instructive talk on his recent trip to New Orleans to attend the National Roentgen Ray Society meeting and his visit to the Colony



for Lepers which is located several miles out from the city. Following this talk the doctor gave an illustrated lantern-slide lecture on technical points in differential diagnosis.

The evening was highly enjoyed by all present, and will long be remembered as one of the most pleasant events in the life experience of a medical man.

E. G. GANOUNG, Secretary.

#### SHAWNEE COUNTY SOCIETY

The annual meeting of the Shawnee County Medical Society was held at the Hotel Jayhawk, Monday evening, December 5. A dinner, which was attended by approximately seventy-five of the members, was followed by a paper presented by Dr. Frank C. Neff, head of the department of pediatrics at the University of Kansas Medical School.

Five reels of motion pictures of the World war were shown by Mr. Richard Hall.

The following officers were elected:

F. C. Boggs, M.D., Topeka, President; J. G. Stewart, M.D., Topeka, Vice President; Earle G. Brown, M.D., Topeka, Secretary; Milton B. Miller, M.D., Topeka, Treasurer; A. D. Gray, M.D., Topeka, Member, Board of Censors.

The report of the secretary showed that thirteen meetings had been held during the year, with an average attendance of sixty-four per meeting.

EARLE G. BROWN, M.D., Secretary.

#### STAFFORD COUNTY SOCIETY

Society met in St. John Wednesday, December 14, at 2:30 p. m. with the following members present: Drs. M. M. Hart, Linnie Haines, Macksville; F. W. Tretbar, J. J. Tretbar, T. W. Scott, Stafford; J. T. Scott, St. John.

Officers for the ensuing year are, F. W. Tretbar, Pres.; T. W. Scott, V. Pres.; J. T. Scott, Sec.-Treas.; Delegate State Meeting, M. M. Hart; Alternate, J. J. Tretbar.

The retiring president, Dr. Hart, gave an interesting address and stressed the importance of regular attendance at the monthly meetings. The treasurer's report was read and adopted.

A luncheon was served in the Blue Lantern Tea Room and the meeting con-

cluded by a general discussion of the proposed Basic Science Act and Birth Control. Every member participated enthusiastically and pledged to support only candidates favorable to such legislation. They expressed themselves as very favorable to inviting the public to attend the regular monthly meetings at three or four meetings each year. It is the intention to hold a public meeting in Stafford, in Macksville and in St. John, during 1928. The program follows:

- I. President's Address....M. M. Hart
- II. Sec.-Treas. Report .....J. J. Scott
- III. Election Officers
- IV. Round Table Discussion, Everybody
  1. Proposed Basic Science Act
  2. Birth Control

The A. M. A. and the Annual State provide variety,  
But the things most helpful to you come from your County Society.

The former come but once each year,  
And you listen to the great,  
While in your County Society,  
'Tis yours to participate.

J. J. SCOTT, Secretary.

#### LYON COUNTY SOCIETY

The society met on December 6, 1927, in the Newman Memorial Hospital, at 6:30 p. m.

Each doctor brought his wife and a splendid dinner and a good social time was enjoyed together.

Dr. J. S. Fulton, the president, being absent the meeting, after the social hour, was called to order by Dr. J. A. Woodmansee. A paper, entitled "The Glands of Internal Secretion," by Dr. Reecer of Hartford, was read. It was a most excellent paper and showed the doctor was a diligent and thorough investigator. The paper was discussed from many angles and all commended the doctor's efforts.

This being the last meeting of the year, election of officers of the society was made the order and Dr. J. A. Woodmansee was elected president, Dr. C. L. Patton was elected vice president, and Dr. M. A. Finley was elected secretary and treasurer.

The University Extension Course in Pediatrics, given by the Medical Department of Kansas University, was well re-

ceived in this section. Dr. Wayne Rupe of Washington University in St. Louis, who gave the lectures and clinics outlined in the course, is a pleasing and convincing speaker and a careful and thorough clinician. About thirty doctors took the course here. Many came in from surrounding counties, and all pronounced the venture a success. We hope the University may continue these fall courses in various branches of medicine and bespeak an increasing interest in them from year to year.

M. A. FINLEY, Secretary.

#### RUSH-NESS COUNTY SOCIETY

The Rush-Ness County Society met at Alexander, December 8. The meeting was held in Dr. Latimer's office at 8 p. m. The following officers were elected: President, Dr. J. E. Attwood, LaCrosse; Vice President, Dr. R. D. Russell, Ness City; Secretary-Treasurer, Dr. L. L. Dyche, Utica.

By vote it was decided to invite the doctors in Lane County to attend the next meeting which will be held in Ness City in February.

The program consisted of an informal discussion. There were present Drs. Latimer of Alexander, Russell of Ness City, Robison of Bison, Dyche of Utica, Grisell of Ransom.

L. L. DYCHE, Sec-Treas.

#### FRANKLIN COUNTY SOCIETY

Regular December meeting at Nelson Hotel. Supper at 6:30, followed by the annual election and a paper on "Dermatology as Related to the General Practice."

The following are the officers for 1928: President, Dr. J. R. Scott; Vice President, Dr. P. R. Young; Secretary-Treasurer, Dr. J. A. Dyer; Censors, Dr. W. L. Jacobus and Dr. P. R. Young.

Doctors F. A. Trump, J. A. Dyer and H. J. Terrill were appointed a committee to arrange for the annual banquet in January when the new officers take office.

Dr. Dana P. Stearns, of Osawatometie State Hospital, was elected to membership in the society.

Dr. H. E. Markham in his paper said: "Skin diseases are encountered by the general practitioner almost daily but he does not seem to take the same interest

or keep abreast of the times in that branch as he does in some other fields."

The doctor spoke of the difficulties in diagnoses, the confusion in nomenclature and the variations in classifications by different authors. The grouping together of diseases similar in appearance but differing widely in etiology. He spoke of the necessity of diagnosis as a prime factor in bringing a satisfactory result, as there was often a remedy that cured if applied to the disease for which it was fitted, while it failed when applied to a similar appearing trouble with a dissimilar cause.

Arsenic he said was the one internal remedy that seemed to have the greatest action on the skin but in most cases local applications were necessary. In general, acute diseases must have soothing remedies and chronic cases stimulating ones.

The doctor pleaded for a more understanding study by the practitioner of skin affections as the proper remedies applied were greatly appreciated by the patients, as often patients were greatly annoyed and much suffering was caused by skin diseases that did not of themselves endanger life. There was a general and spirited discussion following the doctor's paper.

J. R. SCOTT, Secretary.

#### SEDGWICK COUNTY SOCIETY

The Sedgwick County Medical Society held their last meeting of the year on December 20, at 6:30 p. m. in the Grill Room, Lassen Hotel.

Election of officers was the order of business for the evening, and the following officers were elected for the year 1928:

President, Dr. C. A. Parker; Vice President, Dr. C. H. Briggs; Secretary, Dr. W. J. Eilerts; Treasurer, Dr. C. H. McKeown. Delegates to the state meeting: Dr. H. F. Hyndman, Dr. W. A. Phares, Dr. E. D. Ebright, Dr. A. D. Jones, Dr. M. W. Hall, Dr. J. D. Clark, Dr. J. E. Chipps. Censors: Dr. W. P. Callahan, Dr. J. D. Clark, Dr. E. H. Terrill.

At the close of the meeting the following program was given:

Treatment of Colles' Fracture, Dr. Charles Rombold.



Critical Remarks on Modern Treatment of Syphilis, Dr. Rene Gouldner.

Problems of Breast Feeding, Dr. R. A. West.

The monthly clinic will be held at Wichita Hospital, January 17, 1928.

W. J. EILERTS, Secretary.

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## DEATHS

William Ellsworth Dixon, Derby, aged 67, died suddenly, November 17, of cerebral hemorrhage. He was graduated from the University of Nebraska College of Medicine, Omaha, in 1892.

George McKendree Seacat, Cherryvale, aged 73, died October 28, of carcinoma of the rectum. He was graduated from the Kentucky School of Medicine, Louisville, in 1885. He was a member of the Society.

Robert Aikman, Fort Scott, aged 81, died October 23, of cerebral hemorrhage. He graduated from the University of Michigan Medical School, Ann Arbor, in 1868, and Bellevue Hospital Medical College in 1880. He was a member of the Society.

Elwood Armstrong, Greenleaf, aged 73, died October 14. He graduated from the University Medical College of Kansas City, Mo., in 1885. He was a member of the Society.

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## Psychiatric Hospital Association

During the meeting of the American Psychiatric Association this year in Cincinnati there was formed the Central Psychiatric Hospital Association, which is composed of private sanitariums for the care and treatment of nervous and mental diseases. The organization was the culmination of several years thought and a feeling that the necessity existed for such an association. At Minneapolis in October permanent officers were elected as follows:

President, Dr. Thomas Ratliff, Cincinnati, Ohio.

Vice President, Dr. Russell Doolittle, Des Moines, Iowa.

Secretary-Treasurer, Dr. D. A. Johnston, Cincinnati, Ohio.

Councillors, Dr. Frank Norbury, Jacksonville, Ill., Dr. Karl Menninger, Topeka, Kan.

The purposes of this association are to foster co-operation among private hospitals for nervous and mental diseases for their mutual benefit and to promote and maintain higher standards, increase efficiency of organization and the advancement of scientific care and treatment for those in their care.

A committee on standards is meeting with the council in Chicago, December 14, 1927 to formulate standards for hospitals of this type.

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## BOOKS

The Surgical Clinics of North America (Issued serially, one number every other month.) Volume 7, Number 5, (Pacific Coast Surgical Association Number—October 1927.) 266 pages with 132 illustrations. Per Clinic year (February 1927 to December 1927.) Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

Mason, Dwyer and Palmer of Seattle present a clinic on carcinoma of the colon, in addition to which Mason reports a number of other interesting surgical cases. Everingham of Oakland presents a case of pharyngo-esophageal diverticula and another of multiple internal biliary fistulae. Brown of San Francisco discusses the subject of cardio-spasm. Loringier of Los Angeles presents a case of omental adhesions at the hepatic flexure and gall bladder. Lockwood of Pasadena describes the surgical treatment of pulmonary tuberculosis and bronchiectasis. McNerthney of Tacoma describes a suspension technic in thyroid gland surgery and presents some cases. Caffey of Portland has a clinic on cancer of the pelvic colon and rectum. Matthews of Spokane presents a variety of clinical cases. Brown of Santa Barbara, Caldbick of Everett, and many others from the cities previously mentioned have very interesting clinics in this number.

The Normal Diet by W. I. Sansum, M.D., Director of the Potter Metabolic Clinic, Santa Barbara Cottage Hospital. Published by the C. V. Mosby Co., St. Louis. Price \$1.50.

This little handbook was evidently written for the instruction of patients and is excellently adapted for the purpose. A discussion of the various dietary needs of the body is set out in a very understandable way and numerous menus are given for the guidance of those who are in need of this instruction.

Diseases of the Skin by Henry H. Hazen, M.D., Professor of Dermatology in the Medical Department of Georgetown University, etc. Third edition. Published by C. V. Mosby Co., St. Louis. Price \$10.00.

In writing this book the author has confined his descriptions to the commoner diseases of the skin. In this revision of the work he has made some very definite changes, particularly in the classification of diseases. The word "eczema" has been omitted in accordance with modern beliefs. Some of the subjects have been given more attention and all have been brought up to date.

Nasal Neurology, Headache and Eye Disorders by Greenfield Sluder, M.D., Clinical Professor and Director of the Department of Oto-Laryngology, Washington University School of Medicine. Published by C. V. Mosby Co., St. Louis. Price \$11.50.

In this work the author stresses the importance of the neurological side of rhinology and calls attention to the special part played by the involuntary nervous system. He feels that there is need for co-operation between rhinologists, neurologists, internists and ophthalmologists. Some other subjects of particular interest to rhinologists are discussed.

Diseases of the Mouth by Sterling V. Mead, D.D.S., Professor of Oral Surgery and Diseases of the Mouth, Georgetown Dental School, etc. Published by C. V. Mosby Co., St. Louis. Price \$10.00.

The author describes the methods for examination of the mouth and the teeth and the bacteriologic technic. All of the diseases of the mouth with the pathologic changes and the symptoms manifested are fully discussed. The author has attempted to make this work of practical service to physicians as well as dentists. It is profusely and excellently illustrated.

Nutrition and Diet in Health and Disease by James S. McLester, M.D., Professor of Medicine in the University of Alabama. Published by W. B. Saunders Co., Philadelphia.

The author first discusses the need for food and its utilization and food products. He then considers the diet in health. In part two he takes up the subject of nutrition in disease and under this head first considers the deficiency diseases. He devotes a chapter to diabetes, one to obesity and leanness, one to anaphylaxis and food poisoning, one to diseases of the kidney and urinary tract and two to diseases of the digestive organs. Under dis-

eases in which diet is of varying importance he discusses the febrile diseases, diseases of the heart and arteries, diseases of the blood, of the joint, of the nervous system, of the skin and of the endocrine organs. The book concludes with a chapter of tables and charts of more or less practical importance.

The Diabetic Life, its control by diet and insulin, by R. D. Lawrence, M.D., Published by P. Blakiston's Son & Co., Philadelphia. Price \$2.50.

This is a very comprehensive text on the subject of diabetes and describes in practical detail the use of insulin and the dietary management of the cases. This is its third edition and the author has added some valuable data concerning the administration and effects of insulin.

International Clinics, a quarterly of illustrated clinical lectures and specially prepared original articles. Edited by Henry W. Cattell, M.D., with the collaboration of numerous others. Vol. IV, Thirty-seventh series 1927. Published by J. B. Lippincott Co., Philadelphia.

Under the head of Travel Clinics there are a number of very interesting articles by representative men of other countries. A great variety of subjects are covered in these articles. Under diagnosis and treatment, Walsh of New York presents the drug treatment for premature systole. Sherwood-Dunn of Nice, France, discusses the significance of basal metabolism. Higner of Baltimore gives the clinical diagnosis of human intestinal protozoa. Luitz of Brooklyn considers the subject of high blood pressure, and Brooks of New York gives the treatment for a pneumonia patient. There are articles on surgical subjects by Montague and by Pugh. There are also other articles of general interest.

Nerve Tracts of the Brain and Cord, anatomy, physiology and applied neurology by William Kieller, F.R.C.S. Ed., Professor of Anatomy and Applied Anatomy, University of Texas. Published by The Macmillan Co., New York.

This is first a laboratory manual for the study of the nerves and tracts in the central nervous system, but it also gives a summary of the anatomy and physiology of the nerve tracts. The author describes the leading features of the better known nervous diseases and endeavors to correlate their symptomatology with anatomical, physiological and pathological data. This book should aid the general



practitioner in the diagnosis of the commoner forms of nervous diseases.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume XI, Number III, (Tulane University Number, November 1927.) Octave of 210 pages with 46 illustrations. Per Clinic year, July 1927 to May 1928. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1927.

The first article is by Musser on measles, the next by Duval on scarlet fever. Lemann has an article on the treatment of diabetic gangrene. Bethea talks about pleurisy. Hopkins and Denny present a very interesting discussion of leprosy. Daspit has a clinic on skull tumors. Eshelman presents some interesting cases of purpura hemorrhagica. Herrmann discusses purpura as a cardiologic problem. There is an article by Mendelson on the plague and one by Menville on the study of the gall-bladder by Roentgen rays. There are also a number of other very interesting papers.

Radium in Gynecology by John G. Clark, M.D., former professor of Gynecology, University of Pennsylvania, and Charles C. Norris, M.D., Professor of Obstetrics and Gynecology, University of Pennsylvania. Also a chapter on the physics of radium by Gioacchino Failla, Physicist Memorial Hospital, New York. Published by J. B. Lippincott Co., Philadelphia.

The authors give an extensive history of radium. On account of the divergent views regarding the therapeutic application of radium an attempt has been made to collect authoritative data and present these together with the results of clinical experience. They point out that without sufficient knowledge and experience the employment of radium therapy may do much harm. They also stress the point that accurate diagnosis is essential and radium should not be used except by those capable of making a diagnosis. This is a very practical guide for those who wish to use radium therapy in gynecology.

Practical Therapeutics by Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia, etc. Twentieth edition revised. Published by Lea & Febiger, Philadelphia. Price \$7.50.

A considerable number of new remedies have been described in this edition and a great many things that have been learned about old drugs have also been included. The pharmacology, toxicology and thera-

peutics of drugs are thoroughly discussed. Remedial measures other than drugs are given careful attention. The author also discusses the therapeutics of many diseases under their titles.

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#### Inhalation Treatment

One of the simplest and most rational of the many applications available for the treatment of rhinitis, laryngitis, and other affections of the nose and throat resulting in congestion or swelling of the mucous membrane, is adrenalin inhalant, Parke, Davis & Co. This preparation contains in a vegetable oil base adrenalin in the same percentage as that contained in the standard aqueous solution—1 to 1000. The effects of adrenalin inhalant are prompt, but prolonged, for the reason that the adrenalin is released slowly from the oil. Thus the patient gets a gradual and continued astringent action from the application of the inhalant.

While it is usually employed full strength, some practitioners prefer to dilute it with three or four parts of olive oil or cottonseed oil; it does not mix well with mineral oils.

The use of adrenalin inhalant is advised in connection with some bland yet efficient antiseptic—one of the silver preparations, for example.

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#### LISTER'S DISTRIBUTORS

In this issue appears a two page colored insert of Lister Bros., Inc., of New York City. For the convenience of readers, a list of their distributors in Kansas is herewith given:

- Abilene, Luebbers Drug Store.
- Atchison, Walters & Behrens, Druggist.
- Belleville, Dr. W. I. McFarland.
- Bison, Brock & Maupin, Druggist.
- Burrton, Saylor & Hempstid.
- Caney, J. A. Winkler, Druggist.
- Chanute, The Brown Pharmacy.
- Cherryvale, Squiers Drug Store.
- Cimarron, Covert Drug Co.
- Columbus, The S. A. M. Drug Co.; The Charles E. Bartlett Drug Store.
- Conway Springs, W. A. Shaw, Druggist.
- Douglas, Gates Drug Co.
- Ellsworth, Sheriff-Seitz Drug Co.
- Eureka, Red Owl Drug Co.

Formoso, The Metz Packing Co.  
Fort Scott, Pritchard Blatchley Drug Co.

Frankfort, Kampert Pharmacy.  
Goodland, Adams Drug Store  
Great Bend, Sanderson Drug Store.  
Hutchinson, Carroll M. Smith, Grocer.  
Independence, Stevens Bros., Druggist.  
Kansas City, Kan., G. Q. Lake, Drug-

gist.  
Kingman, Kilmers Pharmacy.  
Lawrence, Round Corner Drug Store;  
J. S. St. Clair, Grocer; Rankins Drug Store.

Lincolnville, Demand Drug Store.  
Lindsborg, J. A. Stockenberg, Drug-

gist.  
Manhattan, A. H. King, Druggist.  
Minneapolis, Sparger's Pharmacy.  
Newton, Smith's Drug Store; St. Johns South Side Pharmacy.

Olpe, Olpe Drug Co.  
Ottawa, Kaiser Drug Co.  
Oxford, Backus & Son.  
Paola, W. D. Gray, Grocer.  
Parsons, Dryden-Morris Drug Co.  
Spearville, Messrs. Ruth & McMullen.  
Topeka, A. C. Klingaman & Co.;  
Drisko-Hale Drug Co.

Wichita, The Smythe Surgical Supply Co.; The Tilford Pharmacies.

Winfield, Mell Backus, 805 Main St.;  
Winfield Drug Store.

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### The Civil Legion

The Civil Legion, a national organization composed of those who in non-uniformed activities rendered patriotic service to the national cause, during the World war, has held its second national convention and elected as its officers the following:

National President, Charles R. Wilson of West Virginia; National Vice Presidents, Tom Jones Meek of New York, Charles A. Howard of South Dakota, and J. C. Heinlein of Ohio; National Secretary, John P. Tansey of Chicago; National Treasurer, Frank G. Hajicek of Chicago; National Legal Advisor, Hon. William Lloyd Harding, war governor of Iowa; National Chaplain, Rt. Rev. James H. Darlington, Episcopal Bishop of Harrisburg, Pa.; National Historian, Miss Leafa H. Seibert, of Prophetstown, Ill.

Member of the Executive Committee from the State of Kansas, George A. Elliott of Spearville.

National Headquarters are at 163 West Washington Street, Chicago, Ill.

The Civil Legion is to its members what the American Legion is to the ex-service men.

Following are members of the Kansas State Executive Committee:

Dr. E. E. Morrison and Dr. Edwin C. Button of Great Bend; Dr. James H. Boswell of Baxter Springs; Dr. J. R. Newman of Fort Scott; Dr. Paul Stafford Mitchell of Iola; Dr. T. R. Conklin of Abilene; Dr. C. H. Jameson of Hays; Dr. G. O. Speirs of Spearville; Dr. Claude E. McCarty of Dodge City; Dr. H. L. Galloway of Anthony; Dr. Samuel W. Dunlavy of Parsons; Dr. Clinton R. Lytle of McPherson; Dr. Joseph D. Hinkle of Ness City; Dr. Earl A. Davis of Chanute; Dr. M. McNally of Michigan Valley; Dr. Warren B. Beach of Delphos; Dr. Arthur C. Gulick of Goodland; Dr. David W. Basham, Dr. H. Michener, and Dr. John C. Brown of Wichita; Dr. Oscar M. Longnecker of Rosedale.

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### The American Board of Otholaryngology

An examination was held in Detroit on September 12, during the session of the American Academy of Ophthalmology and Otolaryngology. One hundred and two applicants appeared for examination, with .107 per cent failures.

An examination was held in Memphis on November 14, preceding the session of the Southern Medical Association, with .127 per cent failures.

In the course of the past year, three hundred and sixty-nine applicants have been examined.

In 1928, examinations will be held in Minneapolis, on June 11, at the session of the American Medical Association, and in St. Louis, on October 15, during the meeting of the American Academy of Ophthalmology and Otolaryngology.

Prospective applicants for certificates should address the Secretary, Dr. W. P. Wherry, 1500 Medical Arts Building, Omaha, for proper application blanks.



### **Poliomyelitis Antistreptococcus Serum**

In cases of epidemic poliomyelitis that come under treatment after the paralysis is well established, the best that can be done is to give as good general medical and nursing care as possible. Cases have been described in which convalescent serum—serum from patients who have recovered from the acute symptoms of the disease—appears to have prevented the development of paralysis. The use of Rosenow's poliomyelitis antistreptococcus serum can be justified only as an experiment. The claims of Eli Lilly & Co. to the contrary notwithstanding, this serum so far has not been accepted as of such value as to warrant its general use. (J. A. M. A., Dec. 10, '27).

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### **The Rectal Administration of Ether and Oil**

The Council on Pharmacy and Chemistry has authorized publication of a report prepared by R. A. Hatcher on the Gwathmey Method of Anesthesia, concerning the rectal administration of ether and oil. Dr. Hatcher summarizes his report in part, thus: The admixture of ether with oil or liquid petrolatum constitutes an advance over other methods for the rectal or colonic administration of ether. Probably a mixture of equal volumes of ether and olive oil (or liquid petrolatum) is the most suitable for inducing anesthesia by rectal instillation after the subcutaneous injection of morphine. The method has certain advantages and also certain disadvantages. It shares with anesthesia by inhalation certain drawbacks. There is an urgent need of detailed statistical studies of accidents due to anesthesia conducted in various ways. The choice of an anesthetic and its mode of administration should be made with the same care with which one chooses other therapeutic agents in the treatment of disease, and the use of any method as a routine is irrational and dangerous. (J. A. M. A., Dec. 17, '27).

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### **Progress in Obstetric Anesthesia and Analgesia**

For almost fifteen years, the method of Gwathmey, involving the rectal administration of ether and oil for anesthesia,

has been before the profession. More recently the method has been combined with the subcutaneous injection of magnesium sulphate, particularly for use in obstetrics. Varying reports have appeared in medical literature as to the value of these procedures under such conditions as are encountered in the clinic, in the hospital and in private practice. It seemed desirable, therefore, for the Council on Pharmacy and Chemistry to prepare a statement of the present status of these methods. A survey of the literature indicates to Dr. Robert A. Hatcher that rectal or colonic oil-ether anesthesia has the advantages of sparing the respiratory passages, decreasing secretion in the respiratory tract, eliminating or alleviating the stage of excitement, lessening nausea and leaving clear the field for operations about the head and face. On the other hand, this manner of producing anesthesia is not under such perfect control as when anesthetics are given by the inhalation method. The chief use of the synergistic method of Gwathmey has been in relieving the pains of delivery. The time is not ripe for such general and indiscriminate use of the method as will unfailingly be encouraged by commercial exploitation which has already been done. (J. A. M. A., Dec. 7, '27).

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### **So-called Synergistic Analgesia**

The Council on Pharmacy and Chemistry has authorized publication of a report prepared by R. A. Hatcher on the Gwathmey Method of Anesthesia, concerning so-called synergistic analgesia. The report states that a final opinion on the synergistic action of ether in oil with magnesium sulphate requires a much more accurate knowledge than now exists concerning the potentiation in anesthetic and analgesic action and the lack of potentiation in the toxic actions such as Gwathmey claims to have found. The evidence for his claims is not convincing. It seems quite possible, however, that magnesium sulphate has some action that may be utilized to advantage in anesthesia when our knowledge of its mode of action with morphine and ether is much greater than it is at present. (J. A. M. A., Dec. 24, '27).

### Oxygen by Injection

Experiments to determine the value of administering oxygen intravenously, intraperitoneally and subcutaneously on dogs are reported. Theoretically the oxygen tension of arterial blood can be raised by intravenous injection of oxygen. Practically, however, the oxygen deficiency is accentuated when this point is reached. Results from subcutaneous injection were even less encouraging. There was, however, sufficient absorption from intraperitoneal injection of oxygen to justify clinical experiment with the method. It would be necessary to control the procedure by arterial puncture and blood-gas analysis. (J. A. M. A., Dec. 17, '27).

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### Home Production of Drug Plants

The annual report of the Bureau of Plant Industry of the United States Department of Agriculture for the fiscal year ending June 30, by William A. Taylor, chief of the bureau, summarizes the activities of the bureau which he describes as "primarily a research organization devoted to the investigation and improvement of plant production and plant industries."

Among numerous efforts toward self-sufficient agricultural production in the nation, the report mentions continuance of the effort to provide a domestic supply of menthol by establishment of Japanese mint as a crop in the United States. The conclusion from these experiments is that it will be possible to produce such a crop of satisfactory oil content.

Santonin, an important vermifuge, particularly for hogs, has been controlled by producers in Turkestan who have held it at a high price. Experiments at the bureau's farm at Hermiston, Ore., and culture in the San Joaquin and Sacramento valleys in California indicate the possibility of a domestic supply. In California it grows "exceptionally well" and the report comments that "its introduction would be especially helpful as a money crop to the farmers in northeastern Oregon." An increase in the supply "will no doubt reduce the price considerably, but veterinarians express the opinion that its use for dosing hogs will

greatly increase as the price declines, thus indicating a considerable opportunity for American producers."

Tung-oil trees introduced from China are already on a commercial scale in Florida with plantations of about 1,300 acres. The tree furnishes an oil of high grade for varnishes and paints.

In the field of the fiber plants experiments are under way with the culture of abaca, the plant from which Manila hemp is obtained, in the Canal Zone and in Porto Rico and with henequen and sisal in Porto Rico.

Experiments looking to domestic production of rubber "are being based on a new principle or method of procedure as affording a better approach to the practical problems. Attention is given first to the cultural characters of the plants to determine which species are best adapted for our conditions, vigorous in growth, and readily propagated in large quantities. The cultural characters can be learned more readily and the more intensive and expensive investigations of special processes of extraction and utilization of the rubber or by-products can be limited to the more promising species." Tests are under way in southern California and southern Florida, and these will be extended to Arizona, New Mexico, Texas and South Carolina. Experiments in Haiti with the Hevea trees, the principal rubber variety, are promising, and two kinds of African rubber trees and two rubber producing vines from Madagascar are under observation in Florida.

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### Analgesia in Childbirth

The Council on Pharmacy and Chemistry has authorized publication of a report prepared by R. A. Hatcher on the Gwathmey Method of Anesthesia, concerning analgesia in childbirth. The available evidence indicates that the use of morphine during the first stage of labor and ether or chloroform for the second stage appears to be the accepted procedure and that morphine with chloroform appears to present special dangers. With proper precautions morphine sulphate in the dose of 0.01 gm. (one-sixth grain) for a woman of average size, is



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virtually without danger. The report concludes that no method of inducing analgesia is suitable for universal use. So-called painless childbirth is frequently a most difficult problem. The general practitioner is often misled into believing that he can secure better results by the method that he reads about than by the methods with which he is familiar, when in truth it presents no essential advantage, and, on the contrary, it will prove inferior in his own hands to that with which he has acquired a certain degree of skill. In view of this, the commercial exploitation of proprietary products based on the Gwathmey formulas is potent for much harm, since it will inevitably tend to promote the thoughtless and ill-advised use of the method. (J. A. M. A., Dec. 31, '27).

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#### Some Sainly Cities

A sporty young man in St. Pierre  
Had a sweetheart and oft went to Sierre.  
She was Gladys by name,  
And one time when he came  
Her mother said: "Gladys St. Hierre."

A globe-trotting man from St. Paul  
Made a trip to Japan in the faul.  
One thing he found out,  
As he rambled about  
Was that Japanese ladies St. Taul.

✱ ✱ ✱

Householder—So, my good man, you are in straitened circumstances?

Hawker—Straitened! Sir, if I was twins I'd be parallel.—Answers.

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## RELAXATIVES

\* \* \*

Tourist (in village store): "Whaddya got in the shape of automobile tires?"

Saleslady: "Funeral wreaths, life preservers, invalid cushions and doughnuts."—Extension Magazine.

\* \* \*

"Yvonne is looking old," said Claudine.

"Eh-yah!" returned Heloise, the head waitress. "Her schoolgirl complexion seems to have graduated."—Collier's.

\* \* \*

A Georgia statesman tells the story of an aged Negro who saw an extraordinary-looking instrument in the shop of an optician. He gazed in open-mouthed wonder, and, turning to the optician, inquired:

"What is it, boss?"

"That," replied the optician, "is an ophthalmometer."

"Sho'," muttered the other, his eyes still fastened on the curious-looking thing on the counter, as he backed out, "sho', dat's what I was afeared it was!"—Christian Register.

\* \* \*

I'm 'atin' more vittles than's good for me stummick,  
Just to plaze the kind people who cook them for me;

But when I get home I'll get down to me diet,  
An' divil an egg, mate or poi will I see.  
'Tis kindness misplaced that ye're showing to me,  
For me stummicks not able to be actin' so free.  
(Patient at Menninger Hospital)

\* \* \*

Taint what you got nor what you give,  
Taint what you wear nor where you live  
That puts us out.

It's what you do and what you say,  
It's what you get and how you pay  
We care about.

\* \* \*

"To what do you attribute your longevity?" inquired the long man.

"To the fact," replied the old man, conclusively, "that I never died."

\* \* \*

"Willie," said his mother, "I wish you would run across the street and see how old Mrs. Brown is this morning."

A few minutes later Willie returned and reported:

"Mrs. Brown says it's none of your business how old she is."—Boy's Life.

\* \* \*

How many friends have you today,  
Of those perhaps you have given a stake,  
If you were broke and down and out  
Would come to you and say:  
"Come old man, it's an even brake,  
Let's make it turn and turn about."

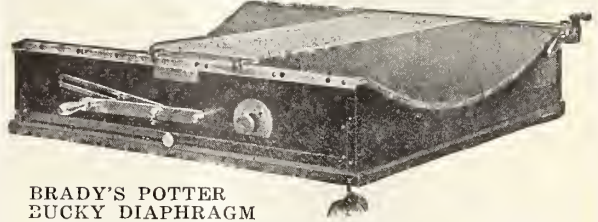
Of those you call your friends, what one,  
When you are on your way to Hell or worse,  
Will come to you with outstretched hand,  
No matter what the deed you've done,  
And with an arm around you curse,  
But right beside you stand.

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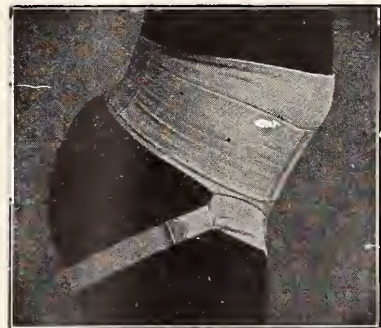
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# THE JOURNAL

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### Problems of Drainage in Spinal Tuberculosis

A. STEINDLER, M.D., Iowa City, Iowa

Paper read before the Kansas State Medical Society at Hutchinson, Kansas, May 4, 1927.

Abscess formation in tuberculosis of the spine is among the complications, not only the most common but also the most serious one, measured by the degree to which it raises the average mortality.

The reason why the tuberculous abscesses arising from the vertebral body assume so much graver aspects than those seen in other tuberculous disease is largely anatomical. In their route along the planes of the inter-muscular spaces, the abscesses, following the laws of gravity and of intrinsic hydro-static pressure, resume relations with the neighboring structures and thereby, often produce disturbances of vital functions, while, on the other hand, their extension into the free spaces of the body frequently makes them uncontrollable by usual surgical measures.

Statistics of tuberculosis of the spine show that abscess formation almost regularly accompanies any more extensive destruction of bone. As long as the abscess remains sessile upon the spine it does not materially influence the prognosis of the case; but, when it begins to wander and to extend into other levels and spaces of the body, it soon begins to produce symptoms, which, by their severity greatly influence the prognosis. Valtancoli estimating the mortality of tuberculosis of the spine in general at 15 per cent, finds the mortality of paraplegia, due usually to extension of abscess formation into the spinal canal as high as 43 per cent. According to Wullstein the mortality in abscessed cases is 27 per cent; according to others as high as 57 per cent. Our own statistics regarding the mortality of a retro-mediastinal abscess, one of the gravest abscess complications, show mortality to

be above 50 per cent. In the discussion on the retro-mediastinal abscess occasion will be found to emphasize the danger entailed by pressure upon thoracic organs on one hand, and the extension into the spinal canal on the other. A large tuberculous abscess, whatever its point of origin in the skeleton, is always dangerous, because of pressure symptoms and possibility of secondary infection. The latter may occur before the contents of the abscess find an outlet; but, such an infection is almost certain to occur after a communication with the outside has become established. Since formation of extensive abscesses is evidence of more rapid destruction of bone, we may assume that the proper treatment of tubercular spine as it checks the progress of destruction would be, *pari passu*, a relative protection against the development of large abscesses, though we know of no treatment, conservative or operative, by which abscess formation can be definitely prevented.

Tuberculous spinal abscesses while still under the skin and not causing any disturbing symptoms should not be interfered with. This is an excellent general rule but is not without exceptions. We shall see in the discussion of the retro-mediastinal abscess, that indications for interference may arise because of intra-thoracic or intra-spinous pressure even though the abscess has not reached the surface.

In the lower portion of the spine intervention is often indicated by secondary infection. It is this type of cases that we wish to emphasize especially.

These abscesses expanding in the retro-peritoneal space when once infected become uncontrollable and lead to a state of general sepsis which makes the prognosis of tuberculosis of the lumbar and lower dorsal spine, and of the sacroiliac articulation, especially unfavorable.

In the dorsal segment the abscess formation is variously estimated at 45 per cent and more. This means abscesses of demonstrable size since a more or less sessile abscess is almost certain to exist, at some time or other, where there is more or less marked destruction of bone.

A not inconsiderable percentage of these abscesses project into the thoracic cavity and, therefore, may be classed as mediastinal.

In a series of 280 cases of tuberculosis of the spine recently investigated, we found 23 or 8 per cent which showed tuberculosis of the dorsal spine with abscess formation in the posterior mediastinum, or 15 per cent of all cases of dorsal tuberculosis. These abscesses remain quiet for considerable time and only after having reached a certain size do they begin to produce symptoms by pressing upon neighboring structures and embarrassing their function.

#### MIGRATION OF THE VERTEBRAL ABSCESSES

**Cervical Abscesses**—Abscesses coming from the lower cervical spine, arise either from the bodies or the neural arches; those coming from the bodies are retained by the anterior longitudinal ligaments and, if deflected laterally, may follow the path of the scaleni and then appear in the lateral cervical triangle above the clavicle. Those coming from the neural arches follow, in general, the path of the scaleni along the loose areolar tissue which covers the plexus. We find in the upper cervical region abscesses coming from the bodies may protrude straight forward into the retropharyngeal space, but from the 3rd cervical downward they are deflected laterally toward the lateral triangle of the neck.

**Mediastinal Abscesses**—The abscess coming from the mid-dorsal vertebral bodies protrudes against the posterior mediastinum, there the comparative elasticity of the tissues permits the abscess to be sessile and assume large dimensions. From the level of the 4th dorsal downward to the diaphragm, accumulation of abscess formation is especially favorable since the esophagus recedes from the spinal column, being only loosely connected with the latter, and there appears between the kyphosis of

the dorsal spine and the back and the freely movable esophagus in front, a triangular space in which a considerable amount of pus may be accommodated. The mediastinal abscesses may extend laterally, posteriorly, into the spinal canal, and downward as well as upward.

In lateral extension they gain between thoracic wall and the parietal pleura the site of vertebral articulations and then pursue their course in the inter-costal spaces between internal and external intercostal muscles.

In posterior extension the abscess finds its way through the long muscles of the back and appears lateral to the spinous processes as a flat, long, fluctuating mass.

The most dangerous route of extension is backward into the spinal canal most often by erosion of the vertebral bodies and direct communication with the lumen of the spinal canal. By accumulation of pus or extension of the granulating tissues pressure is exerted upon the anterior surface of the spinal cord, resulting in paraplegia.

In forward extension the retro-mediastinal abscess by pressing against the bronchial tree causes respiratory embarrassment, or, by pressing against the esophagus, difficulty of deglutition.

Perforation into the pleura cavities or the pericardial sac are rare occurrences. More commonly the growing abscess under increased pressure extends along the thoracic wall.

In downward extension we find the diaphragm a very effective barrier. The only route of extension underneath is through the space formed by the crura of the diaphragm and the muscle bellies of the psoas, and we find that only in exceptional cases a continuation of the mediastinal abscess with the sub-diaphragmatic cavity exists.

In extension of abscesses from the lower dorsal and lumbar spine, we must distinguish two types.

1. The sub-fascial abscesses which find their way of deflex under the fascia of the ilio-psoas.

The most common route of expansion is that between the muscle and the aponeurosis. From here the abscess gradually finds its way to the lacuna muscu-



lorum and to the lesser trochanter. Iliac abscesses, that is, those coming from caries of the os ilei or of the 5th lumbar vertebrae, following the course of the ilio-lumbar artery, often penetrate behind the psoas, and then follow the ordinary course of the psoas abscess.

2. The second group are the supra-fascial or sub-peritoneal abscesses. These are of especial interest from the viewpoint of retro-peritoneal drainage.

The abscess finding it easy to expand in the tract where the aponeurosis is more thin and supple encounters greater difficulty in the adhesion of the aponeurotic sheath and often, therefore, breaks through into the sub-peritoneal space where there is greater facility for migration and expansion. This sub-peritoneal abscess, however, may also arise from a direct perforation through the anterior longitudinal ligament and immediately perforate into the retro-peritoneal space without first gaining the sheath of the psoas. These supra-fascial or sub-peritoneal abscesses become arrested at the level of the femoral arch. The external iliac vessels forming the inner border of the iliac fossa, form a guide for the exit of these abscesses when they will appear in the lacuna vasorum, and from there gain the inner aspect of the thigh. Clinically, the abscess as coming through the crural canal is distinguished from those abscesses which come through the lacuna musculorum, as the latter are situated in front of the femoral vessels and therefore, the beat of the femoral artery cannot be made out, as it can in abscesses coming from the lacuna vasorum. Once the retro-peritoneal space is gained the chance for expansion is almost unlimited. There may be compression of the ureter, or compression of the bladder, or even perforation into the bladder. The abscess may surround the intra-pelvic organs, reach the ischio-rectal spaces and develop into a ischio-rectal abscess. It may also reach the ischio-rectal space along the course of the internal iliac artery. Following the obturator arteries it may reach the obturator foramen.

Abscesses of the gluteal region following vertebral caries are not infrequent. These abscesses migrate posteriorly

across the greater sciatic notch along the median border of the iliac fascia, then over the loose cellular tissue which covers the anterior surface of the sacrum, and finally reach the greater sciatic notch. From here they may follow a course across the lower border of the pyriform muscle and finally appear at the thigh, at the lower border of the gluteus maximus muscle. From here its downward migration is almost unlimited as it finds the loose space between the hamstrings and the vastus externus.

A word may be said about the extension of abscesses from the lumbar vertebrae or the pelvic into the triangles of Grynfeldt and Petit. Abscesses coming from the dorso-lumbar region not infrequently perforate in the back laterally to the spinal column. Often they use the Petit's triangle as a means of exit. This triangle is limited by the iliac crest below, by the external oblique above, and by the aponeurosis of the latissimus dorsi laterally. Another way of exit in the back is through the triangle of Grynfeldt or the tetragon of Krause. This latter is circumscribed above by the posterior inferior serratus, medially by the lateral margin of the quadratus lumborum, and laterally and below by the posterior border of the internal oblique muscles. Penetration of the abscess through Petit's triangle, however, is not common since considerable obstacles have to be overcome, especially that of the lumbo-dorsal fascia.

The drainage of these great cavities is always a formidable operation. Accordingly only the most stringent and weighty reasons should lead to this indication.

Evacuation of the retro-mediastinal space is indicated where the abscess has assumed a size large enough to embarrass the function of the neighboring organs, notably that of the lungs and heart. The drainage is best accomplished by resection of the transverse processes and posterior end of the ribs, the costo-transversectomy, an operation introduced by Menard. The indication for this operation in our series was given by the embarrassment of the function of the intrathoracic organs, or spastic paraplegia. The latter being the result of the ex-

tension of the retro-mediastinal abscess into the spinal canal, more often, as we found in autopsy, by erosion of the bodies of the vertebrae and direct communication of the canal with the retro-mediastinal space.

Of six cases in which costo-transversectomy was performed for drainage of the mediastinal abscess, in three the drainage was successful and a considerable amount of pus was evacuated. Of these three cases two recovered, one with disappearance of paraplegic symptoms and the other with the disappearance of symptoms of intra-thoracic pressure and with general improvement. One case in which the pus sac was not encountered made, nevertheless, a striking recovery from his severe paraplegia, presumably because the pneumothorax produced at operation indirectly lessened the intra-spinal pressure.

Of twenty-three cases of all mediastinal abscesses which we have had under observation we found that the total mortality, during a comparative short period of observation, was over 50 per cent. We believe that in severer cases the total mortality of this retro-mediastinal abscess is far above this figure. The principal indication for evacuation of the retro-mediastinal space by costo-transversectomy was paraplegia; and it is significant that laminectomy failed to relieve paraplegia in three out of four cases; whereas, the costo-traversectomy (after laminectomy in one case), relieved paraplegia in two out of four cases.

We must always keep in mind that a majority of cases of paraplegia, even in adults, recover under prolonged recumbency and traction. Only if conservative measures fail or if the paraplegia changes rapidly from the spastic to the flaccid type, instant relief of intra-spinal pressure becomes necessary by operation. Laminectomy ought to be the operation of choice as it is a comparatively safe operation, the mortality according to Elsberg being only 8.3 per cent.

The technique of costo-transversectomy is not very difficult. Approach is made as in Hibbs procedure, only that the stripping of the posterior surface of the spine is to be carried out farther beyond the tips of the spinous processes,

then the lateral half of the transverse processes is resected, and is followed by resection of head and neck of the rib. If an abscess is present the danger of perforation of the pleura is not very great. Menard, who reported 24 cases of costo-transversectomy, regarded it as a very valuable operation, since he had, among his 24 cases, 19 recoveries and 5 deaths.

The method of evacuating the mediastinum by introducing a trocar as recommended by Voltancoli might be worth trying if one is sure of the size and location of the abscess. Voltancoli operated eight cases, 5 of which were paraplegias, and of which he relieved three, while two remained unchanged. This method, of course, only gives temporary drainage and there is no assurance against re-accumulation of pus.

DRAINAGE OF THE RETRO-PERITONEAL SPACE:  
IN TUBERCULOSIS OF THE LUMBAR SPINE,  
THE SACRUM OR THE SACROILIAC ARTICULATION.

From the anatomical description of the migration of abscesses originating from lumbar spine and sacrum, it is evident that, as they perforate into the sub-peritoneal spaces, they rapidly go beyond control. The gravest complication, however, arises after sinuses have been established and the abscess changes from a purely tuberculous one into a septic abscess. For the closed retro-peritoneal abscesses the rule which applies to the management of tuberculous abscesses in general, still holds, namely, that no surgical interference is justified unless under special conditions; but, with the advent of infection everything changes. The contents of the cavity have become pyogenic and the abscess is the source of a progressively increasing condition of sepsis, whether such infection occurs by the hematogenous route as occasionally observed, or by the usual route of direct contamination through sinuses.

As early as 1893, Dr. Ridlon described the operative evacuation of an abscess situated in the retro-peritoneal space in front of the lumbar spine. He reaches the abscess by incision along the outer border of the erector spinae muscle and dissects until the quadratus lumborum is exposed proceeding to the anterior



fascia of the transversus abdominis. The finger is passed in front of the transverse process in toward the body and the abscess which can be felt by the fingers and the fluctuation of which can be made out by pressure upon the abdomen can be reached without difficulty. If present, sinuses and fistulae show the way to the abscess which is often situated at considerable depth. He stated that the results of this operation are not such as to encourage its use in any but the most desperate cases.

From what we have said before it should be obvious that only such indications as general sepsis from re-infected fistulous tuberculous abscesses would justify this procedure. But it is common observation that tuberculosis of the lower lumbar spine with formation of large retro-peritoneal abscesses, and especially tuberculosis of the sacrum in adults, has a very high mortality when complicated with sinus formation, re-infection and general septic condition.

Drainage of the pre-lumbar retro-peritoneal space was carried out in two cases.

Approach was made at the lateral border of the erector spinae muscle, or around the lateral border of the quadratus lumborum. In one case we found the parietal peritoneum strongly adherent to the transverse fascia so that an approach to the abscess was not possible without injuring the peritoneum. In this case another incision parallel to the spinous processes was made and dissection proceeded through the muscles of the back, and the transverse processes were resected and communication with the abscess established. This patient, who had been septic for a number of months, received decided benefit from the operation.

#### RETRO-PERITONEAL DRAINAGE IN SACRAL AND SACROILIAC DISEASE

This type represents the most severe abscess complications. The accumulated pus tries to gain the pelvic floor and a fistulae not infrequently appears at the inner side of the thigh or posteriorly in the neighborhood of the tuber os ischii. In such cases we avail ourselves of the technique of Picquet in exposing the sacroiliac joint. A curved incision is

made along the posterior third of the iliac crest, continuing downward to the border of the sacrum, similar to the approach of Smith-Peterson. The periosteum and the soft arts are stripped back and are reflected until the entire posterior portion of the os ilei is bared. Then the crest of the os ilei is divided with an osteotome from about the posterior superior spine straight down to the upper corner of the great sciatic notch. In this way a considerable portion of the os ilei is removed. This operation produces a thorough communication with the space in front of the sacrum. In a number of cases we were compelled to resect also a greater portion of the sacrum.

The method of Smith-Peterson which consists in the exposure of the sacroiliac joint through the outer flare of the os ilei, and in which, similarly to Picquet's method, approach is made by an incision from the posterior superior spine along the crest of the ilium toward the anterior superior spine, and from the posterior superior spine downward and outward in direction of the fibers of the gluteus maximus, gives an excellent approach to the os ilei and to the sacroiliac articulation.

If an abscess is present in front of the joint it is better to use the broader communication afforded by Picquet's method, or by partial resection of the sacrum.

This operation was carried out in five cases. In two cases the operation was not able to check the progress of the septic condition, although a wide communication was established and drainage became profuse. In the other three cases the drainage became sufficient to control the septic condition and the patients improved.

#### CONCLUSION

The policy of treating tuberculous abscesses of the spine conservatively is thoroughly sound and should be generally upheld. Departure from this rule, however, becomes necessary in certain contingencies, and operative interference must take the place of conservative treatment. Such contingencies are:

First, accumulation of pus in the retro-

mediastinal space, if it leads to respiratory or cardiac embarrassment.

Second, pressure upon the cord of intra-spinal abscesses communicating with the retro-mediastinal abscess, resulting in spastic paralysis.

Third, retro-peritoneal abscesses which extend beyond control and proceed toward the pelvic floor, when becoming septic after establishment of a sinus or otherwise being secondarily infected.

We feel that these cases are usually lost unless sufficient drainage is established. The most difficult drainage is that of the retro-peritoneal abscess, especially those developing from tuberculosis of the 5th lumbar, the sacrum, or the sacroiliac articulation. Drainage of this region requires resection of a considerable portion of the os ilei and of the sacrum. The nearness of the nerves of the plexus and their anatomical situation renders the operation rather difficult.

Of five cases of pre-sacral abscess formation in which resection of the os ilei or sacrum or both were performed, two died, although there was, immediately following the operation, a considerable temporary improvement. One patient got well, and one, still under treatment, is very much improved, running no temperature and gaining in weight. In the last patient the effect of the trans-sacral drainage is still doubtful, although his general condition is improved.

Trans-lumbar drainage was carried out in two cases. Both decidedly improved. Thoracic drainage of the retro-mediastinal space was carried out in six cases with temporary improvement in the condition in two cases, permanent improvement in 2 cases, and no improvement and death in 2 cases. In all cases the operation was necessitated by grave complications. Sepsis in all cases of retro-peritoneal drainage; paraplegia or embarrassment of lung and heart action in all cases of retro-mediastinal abscesses.

—————R—————

Lady—"Why have they let all the monkeys out of their cages?"

Zoo Attendant—"Holiday, mum. This is Darwin's birthday."—Stanford Widow.

## Postoperative Thrombophlebitis

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Notwithstanding the recent advancement in the science and art of surgery which enables us to obviate many of the hazards formerly attending operative intervention, thrombophlebitis still remains as an everpresent menace even in the slightest operations. The frequency of postoperative thrombophlebitis, the morbidity following its incidence, and the fatal outcome of embolism make it obligatory upon every surgeon to lend his utmost efforts toward the discovery of some means whereby these dangerous accidents may be eliminated from practical surgery.

The importance of the foregoing is emphasized by the frequency of interventions now so often undertaken for the alleviation of minor pathologic conditions not in themselves dangerous to life but which are only inconveniences from which the patient desires to be relieved.

We are wont to associate thrombophlebitis following operation with the principal veins of the lower extremities, but as a matter of fact, no vein in the body however insignificant, can be considered exempt from the risk of thrombophlebitis. Parry reports an instance of pulmonary embolism following the operation for the removal of cataract. Candian cites a case of septic embolism of the retina following the extraction of a tooth. Cresswell reports a case of pulmonary embolism following the extraction of a cataract. Emmenheiser has reported an instance of cavernous thrombosis which developed after operation for submucous resection of the septum nasi. Goodman has written on the subject of thrombophlebitis following tonsilectomy. Gottlieb has called attention to the occurrence of thrombophlebitis following minor surgical procedures. These few cases are cited from among many to show that no vein however small can be considered exempt from thrombophlebitis, and further that minor interventions may often play the role of the exciting cause. However, the veins most frequently involved are



the femoral and the saphenous, and the veins of the left side are more often affected than those of the right. Keene suggested that this may be due to the anatomical fact that the right internal iliac artery crosses the left internal iliac vein in front, the artery sometimes impinging upon the vein in such a way as to form an impediment to the flow of the blood through the vein, and Bain has added that the increased length and obliquity of the vein may contribute to the retardation of the blood current.

When thrombophlebitis occurs in the femoral or the saphenous vein the condition is obvious and is therefore recognized at once, but when the profounder and more obscure vessels are involved, the case may remain undiagnosed until the post mortem reveals the true condition.

It is not at all unlikely that many of the post operative accessions of temperature with retarded convalescence, too often observed, may be due to thrombosis in some deep and obscure vein.

The frequency of postoperative thrombophlebitis is variously estimated at from one to four per cent in abdominal work. The majority of writers place the incidence at about one per cent. Klein of Vienna found that out of 5851 operations there were 70 that developed thrombus. Hampton reports 205 cases of femoral thrombophlebitis which occurred in a series of 21,000 gynecologic operations done in a period of 30 years. Bondy reports 1,000 operations with an incidence of 1.3 per cent of thrombophlebitis. Ranzi cites a series of 6,071 operations with a frequency of 1.2 per cent of thrombophlebitis. It is said by all authorities that thrombosis complicates the convalescence from pelvic surgery far more often than that of the upper abdomen. In the author's personal experience pulmonary embolism has been observed much more frequently after surgery of the upper abdomen than thrombophlebitis.

Thrombophlebitis is by no means infrequent after appendectomy. Interventions involving the uterine adnexae and for the removal of myomata are especially prolific sources of thrombus and embolus. Prostatectomy is frequently

followed by fatal embolism, and occasionally by thrombophlebitis. The arterio sclerotic condition of the prostatic circulation in these aged and reduced individuals seems to favor embolism. The accident may take place at any time from the fourth to the twenty-first day after any operation, or even later.

In view of the preceding statements it is obvious that operative invasion of the vascular system in any part of the body may furnish the necessary factors in the pathogenesis of thrombus or embolus. There are various opinions prevailing as to the etiology of thrombophlebitis. Before considering the pathogenesis of the condition it might be well to call attention to the fact that precisely the same thing may and often does happen during the course of non-surgical maladies. Both thrombophlebitis and embolism may occur during the progress of any of the adynamic fevers.

Thrombosis is not rare in influenza, rheumatism, gout, chlorosis, pneumonia, typhoid and typhus, and during the post partum state.

In discussing the etiology of the condition it is well to consider the subject both from its medical and surgical aspect, and also from the standpoint of the medical practitioner as well as from that of the surgeon. From an article read before the Harrogate Medical Society by William Bain and published in the *Lancet* of April second, of the present year, one may obtain some idea of thrombophlebitis as it occurs in purely medical cases. In discussing the etiology he assigns first place to trauma affecting the endothelial layer of the tunica intima of the veins; secondly, retardation of the blood stream. Bain quotes Barcroft regarding the necessity of oxygen in the tissues, and then points out chlorosis as an example of a disease in which the vascular endothelium is insufficiently nourished due to a diminished hemoglobin content and in which thrombosis readily occurs.

Bain refers to gout as a potential cause of thrombosis in support of the claim that clotting is due to inflammation of the vein rather than to increased coagulability of the blood. Coats and Raineur, as quoted in Bain's paper, call

attention to the very noticeable increase of the calcium element in the blood of gouty patients. Bain mentions parturition followed by excessive hemorrhage as a cause of thrombosis, but we must bear in mind that parturition is attended by conditions precisely similar to those which obtain in surgical cases. According to Bain, thrombosis is frequent in the infectious maladies, but the micro-organisms of the primary disease are never found in the clot. He suggests that pressure from the overdistended sigmoid may interfere with the free circulation of the blood in the left common iliac vein. It is a significant fact that thrombophlebitis, whether occurring in post-operative or ordinary non-surgical conditions, is limited to the convalescing and later stages of the case, and presumably after certain resultant morbid reactions have wrought the necessary pathologic metamorphoses in the constituent elements of the blood to render the formation of a thrombus possible. From this we naturally infer that post surgical thrombophlebitis and that occurring in the infectious diseases may be actuated by identical pathogenic agents. These are factors which must be taken into consideration if we are to solve the problem of thrombosis.

Almost all writers upon our subject have cited the same causative factors with only the difference that each has stressed some particular thing more than the other. According to Alhanus, the predominant causes of thrombophlebitis are sepsis, cardiac disease, pressure upon the veins, lowering of the temperature of the blood in the field of operation, unskillful handling of the blood vessels, the depressing effects of anesthesia, bandaging, and the recumbent position in bed.

Heideman thinks that sepsis is the principal cause of postoperative thrombophlebitis and embolism, and as proof of his contention, he calls attention to the period of incubation.

In order to discover if thrombophlebitis might be of infectious origin Lubarch investigated 215 cases bacteriologically, with the result that micro-organisms were found in but 20 instances. After careful analysis of an extensive collection of histories Bartlett is convinced

that thrombosis is the result of non-pyogenic inflammation aided by chemical and mechanical factors. Bartlett concludes, with Wilson, that the determining factors relating to the genesis of thrombophlebitis are: trauma to the walls of the blood vessels producing a solution of continuity or contusion of the tunica intima thus inviting a deposit of fibrin, which fibrinous deposit is but a step in Nature's method of reconstruction, and in the natural course of things is soon overlaid with a protective layer of neo endothelial cells projected from the uninjured vessel walls on either side of the injury. Where this process falls short of full accomplishment, platelets, fibrin and leucocytes continue to be deposited until occlusion of the vessel results.

Aschoff maintains that certain metamorphoses in the character of the blood are indispensable to the formation of thrombus.

Burnham after many examinations has arrived at the opinion that there is no diminution of the coagulation time of the blood in cases affected with thrombophlebitis.

Bachman has been able to demonstrate an increase in the viscosity of the blood in the prolonged infections and in the adynamic fevers, and furthermore, that in all diseases in which the blood platelets are markedly increased above the normal thrombophlebitis is of frequent occurrence.

Bizzero, as quoted by Bartlett, recognizes an increase in the blood platelets as the principal cause of the formation of thrombus. When the platelets are present to above 750,000 per cubic millimeter thrombophlebitis may be expected. If this be true, it should be possible to foretell and possibly to avert thrombus formation. The platelets collect about the fine filaments of fibrin in a traumatized area in the tunica intima of a vein, polymorphonuclear and red cells are attracted and a thrombus is formed.

Baumgarten concludes that these agglutination phenomena can take place only in circulating blood.

J. E. R. McDonagh, of London, in the *Lancet* of April 16 of the present year, undertakes to dispute the prevailing



theories of blood-clotting. He disputes the existence of any such substances as thrombin and prothrombin. He maintains that clotting can take place independently of blood platelets and calcium. He maintains that thrombosis is due to gelation of the protein particles in areas where the circulation is slowest.

I am doubtful whether we encounter thrombophlebitis any more frequently after septic than after aseptic operations. I believe that the theory of clotting as set forth by McLeod offers the most rational explanation of the occlusion of a vein following an operation. To be more specific, it is but a biochemical phenomenon or set of phenomena subjected to the influence of certain fixed laws which govern the process of coagulation.

According to Howell all clotting is initiated by certain metamorphoses affecting the blood platelets and the white corpuscles whereby prothrombin is set free in the blood plasma, and this in turn is reduced to thrombin. Then through the action of thrombin on the fibrinogen in the plasma there results protein fibrin in the form of delicate threads which constitute the framework of the clot, but in order to complete the formation of the crassamentum there must be present in excess of normal in the blood calcium in the form of a soluble salt. Also the somatic tissues must exert a certain influence which may be alexiform in character, for clotting after all is nature's method of controlling hemorrhage.

Blood must be extravasated or come in contact with an open wound before clotting can take place. The foregoing would account for thrombus formation but does not explain the building of a thrombus in situ. According to Schenk about 65 per cent of the patients who develop thrombophlebitis never recover completely.

Thrombi may become detached by inadvertent massage in the effort to relieve the patient. Thrombus is rarely observed in the case of children under the age of puberty. It occurs most frequently in the middle years of life, and in patients with diseased and defective veins of the lower extremities.

Welch recognizes two sets of etiologic factors in postoperative thrombophlebitis—primary and contributory trauma and infection, and retardation of the blood current and certain changes of a chemical nature in the constituents of the blood.

Monyhan looks upon a high leucocyte count as a predisposing cause of thrombus. In fact those individuals who are generally accepted as poor surgical risks are prone to develop thrombophlebitis. The onset is usually sudden, but a study of the case will usually disclose a more or less uncomfortable postoperative course with slight elevation of temperature. Chill with elevation of temperature generally marks the onset of the accident.

If the thrombus is in the saphenous the pain is felt in the ankle; if in the popliteal about the knee and in the calf; if in the femoral in the thigh and scarpa triangle. The local temperature may be elevated. The vein may be palpated. The entire limb becomes swollen and the pain may be severe. The body temperature rises in proportion to the severity and extent of the involvement. Both extremities may become affected.

The treatment is both prophylactic and curative but the really important thing is prophylaxis, which should consist in a more careful preparation for operation. The patient whose blood pressure is low and whose heart is weakened should receive appropriate medication. Anemic patients should be transfused and if time will permit iron and arsenic should be given. As a rule it is not wise to deplete the preoperative patient with catharsis and starvation. If the calcium content of the blood is above normal the administration of phosphorus in some form may cause the excess of lime to take its normal place in the tissues. If the viscosity of the blood is increased the alkaline citrates should be administered or Hirudin may be given. The ingestion of large quantities of water may be of service. A comfortable unhampered position of the patient on the table is a necessity. Pressure upon the popliteal vessels is to be avoided. The strap over the legs must not impede the circulation. All forms of retractors are to be manipu-

lated with much gentleness. The head of the pancreas may be contused or the circulation in the internal iliac may be arrested by a long-bladed retractor. The incision should be made with a sharp knife. Blunt dissection should be discarded. Ligation en masse is fraught with danger. Hemostasis must be absolute. These are the best methods for the limitation of debris in the field of operation. Let the wound be so reconstructed that no dead spaces are left to fill with clotted blood. Drainage may be useful. Apply the dressings with an eye to the position of the blood vessels. Give the patient a comfortable position in bed. If the blood pressure is below 120 let the patient receive digitalis or caffeine sodium in benzoate hypodermatic form. Bland Sutton has the foot of the bed raised until restoration is complete. He keeps his patients in bed for two weeks. When a thrombus has once taken its place in a vein the patient must be kept at rest and the limb must be handled with great care lest the thrombus be converted into an embolus. The member may be enveloped in cotton batting and placed in an elevated position with ice over the scarpa triangle, or heat if preferred. Two teaspoonfuls of ground mustard made into a paste with a teacupful of lard spread over the limb and covered with cotton batting seems to be of benefit. Camphor in oil has met with some favor in the treatment of thrombus. Monahan has employed colargol intravenously with some encouragement. Morphine may be necessary to relieve pain. The patient must remain in bed until active manifestations have subsided. New collaterals must be established for the circulation before the swelling can disappear. Thrombectomy has been practiced with success, especially in the Scandinavian countries, but cannot be recommended indiscriminately as yet.

I am fully aware that much of the foregoing are but commonplace things, but since we have no strictly scientific means for the prevention of thrombophlebitis, and since the subject is of such paramount importance I hope that I may be justified in presenting the matter in this way.

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### Fads, Fancies and Facts in the Cure of Disease

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Read before the Montgomery County Medical Society, Nov. 17, 1927.

Is it not amazing that there are so many systems, methods and remedies for the treatment of the diseases of humanity?

There are three different systems of therapeutics in the medical profession, that use drugs or resort to surgery in treating disease; and an almost innumerable number of the so-called drugless healers, each claiming that his system is superior in curing disease to any of the others and can give testimonials or concrete evidence of people cured.

There must be some reason for the existence of so many different methods or remedies for the treatment of a certain kind of ailment, because in the last analysis there can be but one that is correct.

To say that the drugless healers and charlatans, quacks and frauds, is no argument and does not explain why they apparently cure sick people and why they have such a large following.

All the believers of the different methods of cure practically agree—except the ignorant, or those who do not believe in matter, food, sickness or death—on the fundamental subjects of medicine and the allied sciences, which are fairly exact, but when it comes to therapeutics, which relates to the cure or alleviation of pain and disease, "Aye, there's the rub," and the parting of the way.



Is it any wonder then that a person who does not think and reason for himself becomes confused when there is afloat such a heterogeneous mass of ignorant, superstitious, pseudo-scientific advice and apparent cure-treatments recommended to an ailing person.

To give advice to the sick seems innate in the human race. It seems to be an open season the year round, no restrictions or license required in most of the states. Were it not for its tragic results in many instances it would be truly laughable.

This advice emanates from all classes of people, the ignorant, the superstitious, and the well educated. A layman writes a book of four hundred pages, all on mastication and nutrition—chew your soup: another writer says, "Eat what you please, when you please and as much as you like. . . . that ham and eggs have built more railroads, constructed more buildings, cleared more forests, mined more minerals than all the breakfast foods that were ever manufactured," *ad infinitum*.

There is no doubt but that there is some good in many of these prescriptions, but most of them cover only one phase of a case. A little learning is dangerous. "Drink deep or taste not the Pierian Spring."

Yet with all the mysteries of the human body in health or disease, where the advice of the most skilled should be sought, does it not look like a tragedy for those who have a limited working knowledge of some of the physical laws of nature and the body to rush in where angels fear to tread and give advice for the restoration of a sick person? It is a daily scene.

Since there can be but one correct specific remedy or treatment for each kind of an ailment, why do diseases apparently yield to so many different kinds of treatment? It is because the foundation or the keystone of the arch which supports all the therapeutics of the drugless healers and much of the medical profession, is a remedy that is as old as the human race; it has been entirely overlooked by a vast majority of the drugless healers through ignorance, mystery and prejudice, and not featured by

those who know its healing power. It is known as the, "Vis Medicatrix Naturae," the healing tendency and power of nature in the body.

The drugless healers' treatments, for the most part, are a smoke-screen and hide the work of the real remedy—the body's own tendency toward restoration; the treatments are a camouflage, marking time while automatically nature is removing the ailment; the remedy is a delusion and the poor deluded patient does not know it; the legerdemain was too cunning for his observation and being deceived ignorantly or superstitiously gives credit to the bridge, good or bad, that for the time being, safely carries him across, and the healer gets another disciple.

Drugless healing like ventriloquism is a deception. The ventriloquist apparently throws his voice, but he does not. Much of the deception depends on suggestion as to the source of the voice sounds.

It is generally known and recognized by the medical profession that a majority of the functional diseases will recover without any treatment; the same can be said of a large per cent of the milder acute communicable diseases, as colds, chicken pox, measles, mumps and whooping cough.

The late William Osler, one of the foremost physicians of his day, said in his Practice of Medicine, third edition, "Pneumonia is a self limited disease, which can neither be aborted nor cut short by any known means at our command. Even under the most unfavorable circumstances it may terminate abruptly and naturally, without any treatment having been administered." This statement must be nearly true, because the annual mortality now supercedes tuberculosis, despite the best known treatment. This same rule holds good in many other diseases, as being self limited in the time of restoration.

Briefly then, health is nothing more nor less than a condition of the body in which all the normal organs are performing their normal functions, any deviation from this condition is called a disease or the results of an injury.

Disease, you might say, is a condition

of the body in which there is an intruder, which causes an interference with the harmony of its normal functions. It might be a nail in the foot, a tack in the lung or worms in the intestinal tract. These foreign bodies when removed can be discerned with the naked eye, but there is an innumerable variety of microscopic intruders, which exist but can be seen with a high powered microscope only, as the germs of typhoid fever or diphtheria.

Cure, as it is used in treating disease, is a misnomer; no remedy or treatment ever cures, the curing is accomplished in the body's bio-chemical laboratory; in the final analysis the most that any remedy or treatment can do is to assist.

The body always tries to expel the intruder in its own way according to the nature of the case, it never confines itself to one line of treatment for all the different kinds of cases. It removes foreign bodies from the eye by flooding it with tears, sneezing for the nose, emesis or purge for the gastro-intestinal tract, a cough for the respiratory tract. In severe hemorrhage it might cause the subject to faint in order to reduce blood pressure to form a blood clot to stop bleeding; it walls off or circumscribes pus in the abdominal cavity as well as in other parts of the body. For the microscopic intruders it has its antibodies and leukocytes; for physical or mental overwork, its warning symptom is pain or fatigue and the usual prescription is rest or sleep.

How different and more reasonable is this line of treatment than that of the drugless cure-faddists, who rides his hobby on the mono-rail track with one kind of treatment for all the different ailments.

In giving the body the credit for curing the majority of the functional diseases, it might be well to mention two of its attributes or silent partners as therapeutic agents; which are time and mental effect. Of the two time is the most essential. Time is one of the indispensable factors in our existence. Few things can be accomplished without taking time into consideration. It takes time for a broken bone to unite, usually from four to twelve weeks, according to

conditions, favorable or unfavorable; it is not united with the rapidity that a blacksmith welds iron; it takes time to remove the germs of chicken pox, mumps and measles; it takes time for typhoid fever, rheumatism and pneumonia to run their course. In many ailments the time of restoration, even when assisted with a correct treatment, is as definite and regular as the coming and going of the seasons, as the revolution of the planets, as the ebb and flow of tides, as fixed as the law of gravity. In mid winter what should be done to bring spring or summer? Wait for the time to arrive. In midnight darkness there is no use to pray for daylight. If a mother's babe had no teeth at eleven months, should she pray, use suggestion, "Every day in every way," or give the child food that contained the elements necessary to produce teeth and more time?

Of the many diseases that respond to the results of time and environment, few illustrate this principle better than tuberculosis. So far there is no known specific remedy or treatment for its cure, other than rest, sunshine, pure air, nourishing food and time.

Repair and cure are akin to growth and development. The farmer recognizes the element of time in maturing his grains and livestock and does not expect to harvest his wheat or corn ten days after planting.

If the cure-faddist can hold his patient long enough, he can get credit for apparently curing the majority of the functional diseases, in which condition the person naturally recovers without any treatment. Thus any system of therapeutics gets concrete evidence and free testimonials for healing the sick and at once strives for public recognition on false premises.

While the medical profession's system of treating diseases is founded on facts and truths, proven by experience and the basic sciences of the profession, and sustained by the allied sciences, yet in therapeutics there is much to learn. For any system of therapy, in which a certain remedy is regarded as without equal for treating a certain ailment today, becomes obsolete in another decade and gives place to a better remedy, is far



from a near completed science or an art. The science of medicine, like other sciences, has gone through a long process of evolution, is constantly improving and has much to learn in the application of remedial agents.

That there is a subtle power of the mind over the body in health or disease can not be gainsaid, the last word has not been spoken. Mind influences the body and the body affects the mind. Try hard as you may neither can be divorced from the other and maintain their existence. They are reciprocally related and each modifies the activities of the other, "It is a rule of psychological science that mental truths can never be properly studied apart from bodily conditions and physical environments amid which they take place."

Any one that says there is nothing to mental therapeutics is entitled to another guess. So long as the human body has a mind, a something intangible, an intellect, a soul, a spirit, a will, an imagination; has nerves of special sense, of motion, sensation, and combined with the sympathetic nerves; and can reason, is susceptible to emotions and passions and the ability, more or less, of expressing them—as love and hate, fear and courage, anger and peace, joy and sorrow, laughter and weeping—there will be more or less room for the science and art of psychological therapy in many of the functional diseases and as an aid in the organic.

That the exhilarating moods of love, joy and mirth are more conducive to health than the depressive states of worry, fear, hate and sorrow, should be obvious to the casual observer. Solomon said, "He that is of a merry heart hath a continual feast."

In mental healing, prayer may have its place, but its healing power is over estimated, an answered prayer should not be mistaken for the fulfillment of a natural law. In all mental healing the results depend much on the force of the impression made on the mind or emotions of the individual, and they may so forcibly engage the attention that any one or all the five organs of special sense may be oblivious by being in a hypnotic condition, and not conscious of the body's

aches and pains; in this condition the so-called miraculous cures are performed.

How can thinking, prayer, suggestion or adjustment cure the nutritional or deficiency diseases? Their remedy is the proper elements in the food or water. It is now a proven fact that the treatment for common goiter is infinitesimal doses of iodine at stated intervals and it must be given at an early age to be effective. It has been recently discovered that ninety-five per cent of all babies have rickets before the end of twelve months—is easily prevented or cured with proper treatment. Anemia, pellagra, cretinism belong to the nutritional class of diseases. Then there are a legion of ailments due to a wrong function of ductless glands. Numerous skin diseases are due to food poisons. The list could be easily multiplied.

To diagnose these cases early and prescribe the correct treatment should be sufficient reason for every person or family to have retained an educated skilled medical adviser, and at stated intervals undergo a physical examination—an inventory of physical assets and liabilities—and seek advice as to how to correct wrong living and forestall all insidious diseases in the inceptive stage.

Of the "57 varieties" of curing systems that exist there could be as many more inaugurated and get equally as good results in curing disease, because they all overlap each other and depend on the body's natural resources, combined with time, for the curing agent.

For a test case we might give to each of them a like functional disease of equal severity; all things being equal, the probability would be that all the cases would recover, and naturally each of the numerous varieties would think that their system cured the case; when if the truth were known none had any curing affect: time and the body's bio-chemical laboratory did the curing. There is no known meter to indicate how much any of the locus pocus types assisted in the various cases.

It is doubtful if there is another vocation, profession or calling where a pretender can carry on with as little learning, preparation or experience and hold

his position, as in the pretension of curing the sick.

Because the natural underlying dynamic power in the body for the correction of most ailments is inherent in the body itself and this factor is so persistent and powerful that in many cases, it will remove the disease in conjunction with a wrong treatment. For this reason the body can undergo considerable abuse and punishment without producing injury, if the insult is not maintained for too long a period of time so that the body cells are not irremediably damaged. Were this fact not the case the human race would long since have become extinct, since having gone through a long period of history when the laws of health and hygiene were poorly understood, and the defense against bacterial invasion not known and the remedial agents then used, in many cases, were more damaging to the patient than the disease itself.

Many diseases to be ever prevented or cured must be attacked in the inceptive stage. It must be remembered that tissue once destroyed can never be replaced. Two outstanding examples for this statement is the premature bald-head or the decayed tooth. When the enamel of the tooth is decayed the loss is permanent, when the hair follicle is destroyed there is no remedy that will restore it; notwithstanding what the patent-medicine hair restoring labels may advertise to the contrary. Also many diseases are very deceptive and insidious in the inceptive stage, giving no symptomatic warning of pain or inconvenience of their existence until much of the tissue is past the stage of complete restoration. The patent medicine labels would have you believe that pain in the back is due to a wrong of the kidneys, when ninety-nine per cent of pain in the back is the result of sprain, lumbago, neuritis or to causes other than kidney disturbances.

Many think that more hospitals are needed to treat and care for the sick and injured. Hospitals perform a useful function, but is it not rather locking the stable door after the horse is stolen. Hospitals take care of people after the damage is done and do little to prevent the ailment. In reality they are human

salvage plants. They do not stop the ever increasing grist flowing into the hopper of wrong living to be manufactured into beautiful products of invalidism; for the dispensary, hospital, and a profitable revenue producer for the commercialized cure-faddist.

What should be built in place of some of the hospitals? Preventatoriums, places to teach people how to live. For the greatest attainment, success or goal to reach in life, is the science and art of living; the science relates to the laws of living, and the art to their application; this living would comprehend physical, mental, domestic, religious, moral and civil living. From the cradle to the bier in some manner in the drama of life, man lives and moves until the curtain falls on the last act.

The annual survey by the American Medical Association in 1926, shows that there were 6896 American hospitals, public and private, with 802065 beds, and 629362 beds constantly in use. Of the 6896 hospitals for the treatment of diseases and injuries, there is not one where the prevention of disease, or the science and art of living is taught. But there are in each of the forty-eight states one or more institutions for teaching the prevention of diseases in livestock. If the number of hospitals were doubled would it lessen sickness or teach prevention?

Should not a certain amount of the present hospital space include a department for making physical examinations of the apparently well and for the purpose of teaching people how to live biologically? The natural corollary following would be prevention.

It has been conservatively estimated that there are continually sick in the United States about 3,000,000 people and that it will require close to the same number to care for the sick. What an economic loss to say nothing of the pain and mental anguish endured by the suffering victims. The World War demonstrated the need for an annual physical examination, when one-fourth of the young men of eligible age for war services were physically unfit. In Great Britain the number of physically unfit was said to have been alarming.



There are the white, black, yellow and red plagues. We quarantine against the spread of the innocent harmless chickenpox, but allow the venereal social leper run at large and spread a disease that has killed 100,000 where chickenpox has killed one; where chickenpox has left one injurious sequel, the spirochaeta pallida has 100,000 to its credit, leaving its tainted brand on helpless posterity to increase in geometrical progression for generations to come, producing fine clinical material for the hospital, dispensary and a lucrative revenue producer for the commercialized cure-faddists. It has always been recognized by the medical profession of all schools to be the most destructive, pernicious, baneful and widespread of any of the diseases that afflict mankind.

Concrete statistics show that one out of every three hundred persons become insane, and that the spirochaete stands at the head of the class with the blue ribbon as the most frequent cause. In some forms of insanity, eighty per cent is due to heredity, and the cause of the hereditary taint is more often due to the effects of the spirochaete than any other cause.

The weekly reports of diseases among soldiers in the World War showed that the venereal was the most prevalent. In civil life it was still more common. If a person goes to a hospital, the diagnosis is not completed until a Wassermann blood test is made.

"Consistency thou art a jewel." The social evil is a contact disease, unlike measles it is not communicated through the air. The mournful spectacle of the condition is, that its spread could be easily stopped in a few years; not by prayers, suggestion or adjustment, but by a rigid quarantine; it could be made as extinct as the dodo. Like leprosy it could be prevented easier than cured.

When cases of smallpox or typhoid fever are discovered they are isolated with the greatest of speed and the source of infection sought without delay; not so with venereal disease, its source of infection must be kept a secret, hid so that innocent youth may become infected and carry on its devastation.

If this disease can be controlled so

easily, why is it not done? Because of the custom of bending the knee and worshipping at the shrine of personal liberty. It would break a precedent of long standing, the move would be too radical, it might reduce the dividends in some institutions.

But not to prevent one of the most destructive diseases known is as unreasonable and crude as the story that is told about an early pioneer of this country. When the family desired some corn meal for food the boy was sent to the mill astride a horse with a sack in front, corn in one end a rock in the other to balance the corn; the boy soon wondered why he should not leave out the rock and instead use corn as a balance; the father objected, saying that "it had been a family custom for generations and to do otherwise would break a precedent of long standing."

The laity do not know the serious nature of this disease and its results, how prevalent it is, nor do they know how universally it is concealed by its victims and the medical profession. Even the courts can not compel its divulgence.

In order to limit the physically and mentally unfit—insanity, epilepsy, imbecility, degenerate criminals and venereal diseases—there was introduced into the last Kansas Legislature a eugenic bill requiring all candidates for matrimony to be examined and receive a certificate showing freedom from the above diseases before obtaining a license to marry. The bill never arrived at the first base—struck out.

One member said, "Had such a law been in force a few decades previous, probably few of the present members would be attending this session." The Kansas Legislature is probably no exception to the rule when compared to other state legislatures.

It simply shows how firmly we are grounded in the idea of personal liberty. Personal liberty, when it interferes with the rights of others, is a synonym for selfishness. We are so strongly wedded to the old custom of trying to cure, instead of trying to prevent, that it will take a half century or more to bring about a reform.

Ponce de Leon, when his health began

to fail, traveled far and wide and searched in vain for the fountain of perpetual youth; had he known what is known today, he would have discovered that near perpetual youth—longevity—is within the reach of all, by the maintenance of normal physiological cell activity, in other words knowing how to live.

Life begins with the cell, the microscopical structural unit from which the body develops. Every cell originates from a parent cell by a process of segmentation. Thus the body of an adult may be traced back to the beginning of one cell, and when completed is the confederation of all the cells. If these cells are kept in a normal condition, free from disease and hereditary taint, then they have the power of resisting disease and of self perpetuation.

The life of cells is never permanent. Millions of new cells are formed daily, and likewise myriads die and are carried away. The cradle and coffin, in cell life, stand side by side and it is a melancholy truth, that as soon as we begin to live, that moment also we begin to die.

Like produces like. The new cell is always like the parent cell. A diseased cell produces a crippled cell, thus establishing a never ending vicious circle.

The true physician's vocation stands out in bold relief, unique among all others. It deals with the existence, welfare and perpetuation of the human family. It holds the key that may in time unlock the mystery that was lost in the Garden of Eden.

"Men that are engaged in the restoration of health to others by the joint exertion of skill and human endeavor, are above all the great of the earth, they even partake of Divinity itself, since to preserve and renew is almost as noble as to create." To cure has been the voice of the past, to prevent is the Divine whisper of the future.

#### **Some Observations on Elective Podalic Version**

R. H. HERTZLER, M.D., Newton

Read before the Harvey County Medical Society, March, 1927.

In the beginning of my observations I choose to tell you first what I will not discuss.

1. I will not discuss version in opposition to other obstetrical procedures. Every man has his own likes and dislikes, his own methods, and by all means ought to know his own capabilities.

2. I will not quote the statistics of other men who regularly perform version, but I propose to let this tub stand on its own bottom. I will confine myself solely to my own records and to those of the other men of Newton and vicinity as a group, i.e., to this registration area.

3. I will make no comparisons, personal or otherwise, in order to dilate on my ability as a first assistant to women in labour but when comparisons are made I beg of you to accept them to prove or disprove my claims for podalic version as a routine procedure.

4. I will not recommend podalic version for every man. The price of expertness is too expensive for the pioneer.

5. I will not discuss technique—that can be read in a book—that can only be gained by much thought and experience.

However, the object of this paper is to present to you facts and figures gleaned from my practice, regarding a method which I consider epochal and the most practical and wonderful achievement for the relief of pain since the discovery of chloroform.

#### **INDICATIONS FOR ELECTIVE PODALIC VERSION**

The indications for version are the same as formerly, except that the adept increases his indications to cover numerous conditions for the shortening of the second stage of labor and for the relief of pain. I continue to do version for almost any malposition of the child. Some time ago I started the discussion of a paper on "Dystocia" given by Dr. Martin, at which time I made the remark that dystocia, due only to a faulty position of the foetus, did not exist for the man who could perform podalic version with confidence. Much to my surprise that statement went unchallenged. Of course an early diagnosis of the position must be made and version accomplished before tetanic uterine contractions around the child or serious impaction of the foetus obtains.

I have performed version for persis-



tent occipito posterior position, shoulder presentations, cases of prolapsed cord, or as so frequently happens a prolapsed cord beside a presenting hand. Cases in which the hand and arm alone present beside the head are sure to rotate slowly and incompletely. Face presentations with chin anterior or posterior, transverse presentations, cases with both hands presenting, or those of no presentation whatever, all give adequate reason for podalic version.

"A type of case where version has proved of especial advantage, is that in which we have absolute or partial cessation of the pains when dilatation of the os is more or less complete. We frequently encounter cases unassociated with any abnormality in the position of the child, or any contraction or malformation of the pelvis, the progress of labor being retarded solely by uterine inertia."

Potter calls attention to another type of case in which version is an advantage, the patient with a pendulous abdomen. I have not yet encountered such an indication. In such cases an early version is indicated if the pelvic measurements are not too greatly reduced, because the exertion of the uterine force is not in the direction of the axis of the birth canal, and labor is invariably prolonged when the patient is left to her own resources.

Version is indicated in moderately contracted pelvis, where labor is protracted and cesarean section is not deemed necessary. Judgment based on knowledge and perhaps a few sad experiences is necessary for a proper evaluation of the possibilities.

I have performed version for placenta marginalis in multipara; and this complication is best treated by Potter's method of podalic version.

And lastly, the far greater percentage of my versions are done to eliminate the second stage of labor. I shall not amplify that assertion except to add that as thoroughly as my previous experience makes it possible, I do the operation only in properly selected cases.

#### PELVIC MEASUREMENTS

About two years ago I read a paper before this society in which I advocated the routine use of the pelvimeter in all

primipara, contending that to be forewarned was to be forearmed. I still hold that the pelvimeter is of value, but the more detailed knowledge gained by the examining hand, a knowledge absolutely necessary to the one about to do a version, has superseded and displaced the findings of the pelvimeter so that I have dispensed entirely with the procedure. I depend now solely on my personal experience, considering the history of the patient, the general build of the individual, and the knowledge gained by my own hand in the uterus. I consider the information obtained in this manner of infinitely more value than any obtained by more or less questionable calculations of inside or outside pelvic measurements. I do not accept a certain number of centimeters as the *sine qua non* for the employment of any procedure. I repeat that it is only by experience and the practiced touch of an educated hand that one can properly evaluate the disproportion between the foetus and the pelvic canal and decide on the feasibility of any operative manipulation.

#### ANESTHESIA AND THE ANESTHETIST

To effectually carry out elective podalic version the patient is anesthetized to the stage of deep surgical anesthesia, so that there is no resistance to the various procedures to be carried out. Complete relaxation of the uterus must be obtained and maintained before the hand enters the uterus.

Competent administration of the anesthetic is an absolute necessity. The idea that anyone can spill chloroform or ether on a mask efficiently enough to secure the proper degree of anesthesia for an artificial delivery, should be once and forever banished from the mind of the man who intends to do a successful version. Version can be readily carried out single handed, but the anesthetic must be handled by someone who knows his business, otherwise it is useless to attempt the maneuver.

My anesthetist, not me by the way, has frequently been taken to task for his free use of chloroform in my operative obstetrics. He uses chloroform with a large ether mask, often by the closed method. We have tried ether with no success. It does not invariably give complete re-

laxation and is not sensitive enough for the specific requirements of podalic version. After chloroform the patient recovers quickly and almost invariably is awake without vomiting before the third stage is completed. We have had no difficulties so often ascribed to chloroform. And we have had no fatalities. Our experience like Potter's is "chloroform instead of ether despite the findings of the Anesthesia Commission that is supposed to have settled the question."

#### MORTALITY

In all my limited obstetrical experience I have never had a maternal death either before or after confinement.

All my statistics which I will give are taken from the records at Bethel Hospital, at Newton, and from the vital statistic records to be found in the office of the registrar for this registration area at the city offices. These records are easily obtainable by anyone at any time. I will not go into cumbersome and tiresome detail but will give you a summary of my findings. For the sake of argument and to cover those years that most nearly include my work with elective podalic version I take the records of the years 1924, 1925, 1926. These mortality statistics include the record of all still born babies and those of all babies dying within ten days of birth. I contend that with but exceedingly few exceptions babies that die at least up to the age of ten days after delivery die because of a birth injury and should be properly counted. My own mortality records are based on the same premises.

During the three years before mentioned the total death rate of babies was 5.27 per cent in our registration area. My own death rate for the same period taken from the same records, including deaths following ordinary normal deliveries as well as version, was 2.22 per cent. These figures are easily verified by anyone who chooses to make the effort. My percentage includes two macerated babies which were dead from seven days to ten days before delivery, and the first of a set of triplets which lived some hours.

In the last one hundred and one consecutive elective podalic versions I have

had two deaths—1.98 per cent. One of these was just one of those unaccountable things. The version was easy, no particular or strenuous manipulation. The other was a thirteen pound foetus born to a mother who refused a cesarean section.

Furthermore, I have had to date seventy-six consecutive versions without a foetal injury or a foetal death.

#### RUPTURE OF THE UTERUS

Rupture of the uterus during version has usually occurred when the operation was attempted after the amniotic fluid had escaped and continued uterine contractions had brought about tetani, or when neglected malpositions had brought the uterus to the point of rupture. I have never seen a ruptured uterus during version and have never had one in my practice. This seems to emphasize the fact that the operation must at all times be done only in properly selected cases.

#### BIRTH INJURIES

In my whole series of cases I have had two fractures. One was a fracture of a humerus which occurred as a result of an extended arm in a close knit primipara, together with a poor anesthetic. The reason for this accident is plain enough now as I look back upon it in the light of longer experience. I had read, of course, of the dire results following extended arms, and when the thing actually happened to me I at once became panicky. I have since had extended arms, not one only but two, and have never again broken a bone. The first one should never have occurred.

The other fracture was a broken clavicle done during a very difficult extraction of an immense head.

My mortality rate speaks for itself, should questions of cerebral hemorrhage, herniation of the medulla, etc., come into your mind.

#### POST-PARTUM INFECTION

Preparation is made for version as for any other surgical operation. Instruments, operator, patient, are sterilized as thoroughly as for laparotomy. The abdominal surgeon taught us long since that the abdominal cavity could be explored with impunity. It remained for men like Potter and his disciples to



prove to the world that the uterine cavity could be invaded with equal facility and safety.

I have never seen a temperature report or any statistics regarding postpartum infection following version. The figures I am about to give you were taken from one hundred of my case reports of version, picked at random, and from one hundred of your case reports picked at random by the office assistant at Bethel Hospital.

In studying these two hundred records a very peculiar circumstance came to my notice which did not make my task any more pleasant. I found that 22.64 per cent of your cases entered Bethel Hospital with a temperature of 99 degrees F. or more, or developed 99 degrees F. or more before the expiration of twenty-four hours. One-fourth of these had a temperature of 100 degrees or more sometime during the first twenty-four hours. On the other hand, and here lies an unexplainable mystery, I found that of my cases 54 per cent entered the hospital with a temperature of 99 degrees F. or more or developed 99 degrees or more before the expiration of twenty-four hours. Also exactly one-fourth had 100 degrees temperature or more and one had 101 degrees plus on entering.

I can't interpret this discrepancy, but I will take advantage of it to account for the continuance of the temperature in many cases after delivery. A much larger series of cases might change the figures entirely. Following is the temperature record by percentages:

|  | Your cases | My cases of version |
|--|------------|---------------------|
| Temp. 99 deg. and under.....           | 16.8%      | 10%                 |
| Temp. over 99 deg. but below 100 deg.. | 58.4%      | 54.0%               |
| Temp. over 100 deg. but below 101 deg. | 18.8%      | 25.2%               |
| Temp. over 101 deg. but below 102 deg. | 1.0%       | 8.0%                |
| Temp. over 102 deg. ....               | 3.77%      | 2.70%               |

The four cases of mine having a temperature of over 101 degrees had this temperature for one day only and with a normal temperature on the next morning; two cases had 102 degrees for one day and then dropped to normal, one had 104.6 degrees suddenly on the eleventh day. The next morning the temperature was normal and remained so.

I wish you to bear in mind that these cases of version include consultation cases of all sorts, patients who had been

in labor for hours, whose bag of waters had ruptured hours before, who had been subject to numerous vaginal examinations under adverse conditions, and those upon whom other means of delivery had been tried.

Now taking the high temperatures in the records of your normal delivery cases I find the one case reaching 101.2 degrees had 100 degrees plus for five days, one case reaching 103 degrees had 100 degrees plus for nine days, one case reaching 104 degrees had 101 degrees for five days, and one case reaching 104.6 degrees had 102 degrees or more for thirty-three days.

I make these comparisons only for purpose of showing the possibility of entering the uterine cavity without detriment to the patient and for the purpose of adding further testimony to the plausibility and sanity of elective podalic version.

#### MORBIDITY

The foetal mortality and morbidity compares favorably with that of any other form of delivery, and in my particular series there is no comparison.

There have been no serious injuries to the mother. In 661 cases recorded by all physicians, at the date of the writing of this paper, in the record book in the delivery room at Bethel Hospital since that particular record has been kept, I have had just 2.38 per cent less perineal sutures following version than were necessary in the remainder of the 661 cases. This is easily verified by anyone who chooses to take the time and make the effort. I will admit these statistics to be very flexible for they do not give an adequate idea of the amount of perineal injury that might have necessitated suturing. However, I know that a large part of the suturing that I did was to repair of first degree tears, tears through the vaginal mucous membrane or perineal skin only. I cannot find that I have ever had a laceration through the sphincter. It is a fact that the ordinary foetal head will pass much more readily when it comes last.

In this connection it is interesting to note that 45 per cent of my versions have been employed in primipara.

I can state with confidence that these

injuries are not any more frequent when version is employed. And the injuries are much less frequent and much less severe following version than after the use of high or medium high forceps, particularly in occipito posterior positions in which the forceps is used as a rotating instrument. And that holds good for the foetus as well.

As far as it has been feasible I have made vaginal examinations of my patients at some time after delivery. I have not found, as some men contend, that my patients suffer more cervical laceration than when other methods of delivery have been used, and this for the reason that the os must be dilated or easily dilatable and the cervix must be entirely effaced before the operation of version is begun. Let someone attempt an internal podalic version before the cervix is effaced and the lower uterine segment is fully blotted out!

There were no alarming hemorrhages. Perhaps it would be more just to state that there were no more hemorrhages or any severer hemorrhages following version than following normal deliveries. The period of involution is shortened. The convalescence, on the average, is more rapid, due, I believe, to the fact that the mother is saved from two hours to six or eight or ten hours hard, nerve racking, exhausting labor and consequently eliminating much shock. There was greater strength, quicker mental and physical recuperation and a sense of well-being strikingly in contrast to those patients who had to endure the protracted anguish of a long second stage of labor.

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### KANSAS MEDICAL LABORATORY ASSOCIATION

#### Laboratory Diagnosis of Botulinum

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*C. botulinum* is widely distributed, being found in the soil of nearly every country of continental Europe as well as in our own states and possessions.<sup>1</sup> While the organism is thus widely distributed,

the disease botulism is rather rare, only occasional epidemics, or sporadic cases occurring. The disease occurs in fowls and in some of the lower animals. The type A strains are particularly toxic for chickens,<sup>2</sup> causing a variety of limber neck. The organism has also been associated with forage poisoning in cattle and horses.<sup>3</sup> The laboratory worker finds it necessary at times, to make tests for botulinus toxin or for the organism itself in food suspected of causing poisoning or from the vomitus or stomach contents of the patient. The following procedure, slightly modified, has been suggested by the U. S. Bureau of Chemistry.<sup>4</sup>

#### PREPARATION OF MATERIAL

If the material is a solid, portions are placed in a sterile mortar and ground up in just sufficient sterile water to render it semisolid. If it is a liquid it may be used without further treatment.

#### FEEDING OF ANIMAL

5 to 10 cc of the prepared material is slowly fed to a guinea pig by means of a medicine dropper, allowing the pig to swallow normally.

Symptoms of botulism usually occur in the animal after 6 to 8 hours and consist of ruffling of the fur, general weakness and partial paralysis of anterior or posterior extremities or both, dilatation of the pupils, and inability to swallow. Death usually occurs after 24 to 48 hours.

The above feeding experiment might be considered as a presumptive test and positive findings may be confirmed by cultivation of the organism and determination of the type of toxin produced.

#### CULTIVATION OF *C. BOTULINUM*

Some of the material prepared as above for feeding, both heated (80 degrees C for 20 min.) and unheated, may be inoculated in various media, and incubated under anaerobic conditions at 37 degrees C for 2 to 4 days. A medium which is found to be very useful for anaerobic cultures is Burke's sheep brain medium.<sup>5</sup> When freshly heated before inoculation, this medium does not need to be covered with oil. When an oil is needed on a liquid medium, crude vaseline has been found more suitable than thinner grades of oil since it forms a



plug that prevents the escape of gas.

Positive cultures will usually show a good growth, with gas bubbles and a putrefactive odor. Microscopically these cultures should show the presence of large, gram positive, sporulating bacilli. Such cultures may be tested for toxin production by feeding as above.

The type of the organism may be determined by feeding at the same time as the test pig, two control pigs, one protected by an injection of several units of antitoxin type A and the other several units of antitoxin type B.

There is evidence to show that there is a third type of *C. botulinum* called type C against which neither type A or type B antitoxin protects.

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### UNIVERSITY OF KANSAS CLINICS Amoebic Infection With Dysentery

ALBERT S. WELCH, M.D.

Department of Medicine

This young man has been trying for more than a year to get rid of abdominal pain, and his condition has been diagnosed at different times as chronic appendicitis, cathartic colitis, neurasthenia and gall stones. Probably only lack of funds to defray hospital expenses has kept him from having an operation.

His chief and only complaint is pain just above the umbilicus, so severe that he has been forced to abandon his work in spite of the fact that a wife and six children are dependent upon him. The pain is of approximately one year's duration and was insidious in its onset. Before that time there was only occasional discomfort referred to the abdomen, and this was *always* relieved by a laxative. His present pain, however, is not materially affected by a bowel movement.

The patient knows no cause for his trouble. He describes the pain as a *hurting* or *dull ache* that is *always* located just above the umbilicus and measures about three inches transversely and an inch in the other direction. It does not seem to be deep and never radiates. The pain is frequently present in the

early morning and is usually at its height before breakfast. It is not noticeable while eating but customarily begins from fifteen minutes to half an hour after he has left the table. It seems to be a little less severe when he rests, but *is not materially affected by pressure or by large quantities of baking soda*.

There is no belching, no excess flatus, no nausea and no vomiting. The patient's appetite is unusually good. From *one to four stools* are passed daily and the patient has been in the habit of taking a weekly cathartic for many years, not because he is constipated but because he thinks that these may do him some good. The stools have never been noticeably black or contained red blood, and during the last few months they have been mushy and *never formed*.

There has been no appreciable loss of weight, but the patient feels much weaker than he used to be. The pain has grown more severe and more enduring as the months have passed.

His six children and wife are well, and there is no similar illness among his brothers and sisters. His parents are living. There is no history of familial cancer.

This patient was born in a small town in Kansas and has never been outside of the two states, Kansas and Missouri in all of his thirty-four years of life. He works as an usher at the union station, where travellers passing through often give him basket lunches and fruit.

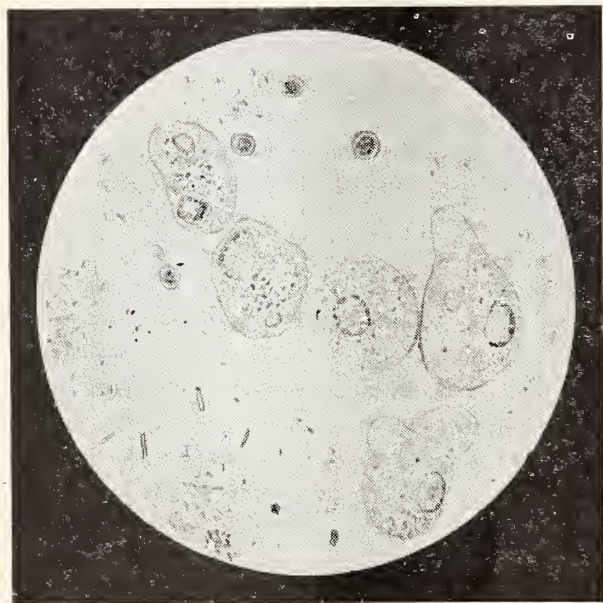
We notice that he has a drawn expression as if he were in constant discomfort, and that he appears pale. His blood pressure is 110 systolic and 70 diastolic. His Wassermann and Kahn tests are "negative." Analysis of the gastric content an hour after the administration of a test meal reveals 16 points of free acid and 17 of combined. There is no occult blood in the stomach contents.

An examination by means of the fluoroscope fails to demonstrate the duodenal bulb. The possibility of duodenal ulcer is presented.

*The stool* is mushy, gaseous, and filled with large particles of nondigested food and mucus. There is no occult blood.

A white cell count on blood from the finger-tip reveals 7,600 cells, and a differential shows that of these 3 per cent are eosinophylic. The hemoglobin is only 82 per cent and the erythrocyte count is correspondingly low.

Now we believe that this patient is not afflicted with the cathartic habit, because of his mental attitude. He has followed directions and taken no laxatives for several weeks, but his pain and frequent passage of mushy stools have continued. He has been given large doses of calcined magnesia and calcium carbonate to adequately control the gastric acids, but his pain was not improved in the least. Of course he has worried about living expenses, especially since his trouble forced him to quit work, but an examination of his reflexes and in-



quiry into his psychic condition fail to show evidence supporting a diagnosis of irritable bowel on a nervous basis of this order.

There was a temperature of 99 degrees recorded at one time, but on several occasions since, no fever has been found. Nevertheless, this must not be entirely disregarded. The diarrhoea, constant aching pain, and 3 per cent eosinophilia must be accounted for.

Nothing unusual was found in the urine.

The patient passed a fresh stool at the office, and while it was warm, a

piece of mucus was placed upon a glass slide, slightly flattened under a coverslip, and examined under the high dry lens of the microscope without staining. Bodies like these pictured were found. When the slide was gently warmed, the bodies became quite active and pseudopodia were quickly shot out, sometimes in several directions at once. Movement was definite, in a single direction, and active. While no intracellular erythrocytes were found, the size of these amoeba—mostly more than 20 microns—and their activity suggest forms other than *entamoeba coli*. It must be remembered that not even occult blood was found in the stools. These amoeba were present in large numbers, as many as fifteen to a field under the high dry lens.

Further study of the parasites will be necessary for proper identification, with stains. Meanwhile we will give the patient frequent colonic flushings with ipecac and emetine hydrochloride, kaolin in large quantities by mouth, and a diet with little bulk but much food value.

—R—

### Some Effects of Synthalin

Investigation by Blatherwick and his colleagues at the Santa Barbara Cottage Hospital in California demonstrated that synthalin administered by stomach tube failed to produce hypoglycemia in rabbits. Subcutaneous and intravenous injections usually decreased the blood sugar. Acute nephritis is produced by parenteral administration. There is also injury of the liver, as shown by a decreased ability to deaminate subcutaneously injected glycine. Certainly caution should be exercised in the use of a drug showing such properties. Blatherwick points out that the hypoglycemia produced by synthalin may be due to a combination of at least two processes. One of these resembles the action of insulin and the other that of hydrazine. The latter substance appears to cause hypoglycemia by injuring the liver and thus preventing normal glycogenesis. Synthalin has apparently not yet met the prerequisites for rational use in the relief of diabetes. (J.A.M.A., January 21).



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### FINANCING PROGRESS

To every member of the Society who joined since 1919 it has presented a bonus. How? At that time there was a nice little surplus, an invested fund of about ten thousand dollars drawing interest. Since 1919 this fund has been drawn upon to meet the expenses of the Society until it is now almost exhausted. Since 1919 the members of the Society have not paid enough in dues to meet the necessary expenses and the funds accumulated from dues paid by members prior to 1919 have been used for the purpose. Therefore the Society has presented to each member the amount of the difference between his proportionate share of the expenses and the amount he paid in dues. That hardly seems fair. It may be fair for those who contributed to the reserve fund, but those who have become members during the past ten years certainly ought to, and no doubt are willing, to pay their fair proportion of the expenses. At any rate they will be given an opportunity to decide that question at the next annual meeting.

A few years ago the dues were raised from \$3.00 to \$5.00 and it was expected that this would meet the expenses, but even then a little foresight would have shown its certain inadequacy. It must be remembered that \$2.00 per member goes into the Defense Fund and can be used for no other purpose. Presumably \$2.00 per member goes to the publication of the Journal although in reality only about one-half of that amount has been used. The report made at the last annual meeting shows that besides the amount paid from the Defense Fund, and the amount paid to the Journal, there was \$2,984.25 paid from the general fund. Of this amount \$725.60 was expended by the Bureau of Public Relations. This leaves \$2,258.61 that was expended in connection with the ordinary business of the Society, the expenses of the council and the expenses connected with the annual meeting. This amount is equivalent to \$1.50 per member. But, if \$2.00 be set aside for the Defense Fund and \$2.00 for the Journal there is but \$1.00 of the \$5.00 dues left for these expenses.

Fortunately the Journal cost the Society only 80 cents per member so that there was really \$2.20 out of the \$5.00 for the general fund. The House of Delegates had, however, instructed the Council to establish the Bureau of Public Relations and outlined its functions. The expenses of the Bureau from August, 1926, to May 1, 1927, was \$1,006.00, but only \$725.60 had been paid and included in the report of the Treasurer. The House of Delegates voted to appropriate \$200.00 per month for expenses of the Bureau to May 1, 1928. This is equivalent to \$1.60 per member.

To recapitulate, if \$2.00 per member is set aside for the Defense Fund, \$2.00 for the Journal, \$1.50 for general expenses of the Society, and \$1.60 for the

Bureau of Public Relations, \$7.10 must be collected from each member of the Society to meet the expenses. If only \$1.00 is appropriated for the Journal then at least \$6.10 must be collected.

It is sufficiently apparent that the annual dues must be increased or the activities of the Society must be curtailed. Assuming that the members of the Society vote against the amendment providing for an increase in dues, then it must be determined what particular group of activities shall be dispensed with.

An abandonment of the Defense Fund, providing for the defense of members in malpractice suits, seems out of the question. That matter has come before the House of Delegates repeatedly and the sentiment has been overwhelmingly in favor of maintaining that feature of the Society's economic efforts. It is a good investment as can easily be shown by the results in cases of malpractice defended by the Society.

No state Society can prosper without a Journal. It is needless to give the numerous reasons for this statement, however, one of the evident ones is that those who take the trouble to prepare papers for the annual meeting want those papers published and unless there is some assurance that they will be published the programs will certainly be uninteresting and hardly worth while. But the Journal is actually a good investment for if the subscriptions from the members be calculated as a part of its earned income as is done with other such publications, it makes a profit of about \$2,000.00 each year.

It is hardly likely that there are any members of the Society who can't read, but it must be admitted that there are some in this and in other state societies who don't read. To these the Journal might be worth 35 cents for wrapping

paper and similar purposes. To those who do read, the original articles and the University clinics are worth more than the Journal costs them. One who can compare the Journal with a hundred other publications of the same class must conclude that it is well worth the subscription price. Of course this may be biased judgment on the part of the editor, but there are other and more reliable evidences of its accepted value. Its subscription list outside of the membership in the Society is increasing and the number of calls from all parts of the country for a copy of the Journal containing some particular article is also steadily increasing.

There is no possibility of reducing the ordinary expenses of the Society.

If the Defense Fund is continued and the Journal is continued and the ordinary expenses of the Society cannot be reduced, then the dues must be raised or the Bureau of Public Relations must be discontinued. The Society must drop back into the old rut in which it had been running for fifteen years.

At this time it is impossible to say what this bureau has accomplished, but if the Basic Science Act is passed by the next legislature it will have accomplished enough to justify the expenditures made. It is easy to tell what the Bureau has done and is doing.

It has established a lecture bureau and is prepared to furnish lecturers for public meetings where they can be arranged for. It is now sending to 68 newspapers, every week, an article on some medical subject in which an effort is made to impress the reader with the fact that scientific medicine is accomplishing something worth while in the diagnosis and treatment of disease.

It has prepared and mailed 5,000 pamphlets comparing scientific methods with those of the cults.



It has printed and mailed 6,000 pamphlets in defense of immunization methods, written by a layman in reply to an attack on such methods by the cults.

It had printed and mailed 10,700 letters from the medical students of the University protesting against unfair legislation.

It has organized a state-wide campaign committee consisting of one member in each of 87 counties in the State. Through these it will keep in touch with the attitude of each member of the legislature toward the proposed bill.

An article is now being prepared which will compare the various laws governing the admission of all those who practice the healing art and show why some law like the Basic Science Act should be passed. This article will be given the widest possible distribution among the voters of the State.

It will be for the delegates at the next annual meeting to decide whether these activities shall continue. If by that time they have been convinced of the value and importance of this work, then it will be necessary to determine the amount of dues necessary to meet the expenses.

At the last annual meeting a resolution to amend the constitution was introduced. This amendment must lie over for one year and will come up for final action at the next meeting. It proposes to amend the second sentence in section 1 of article XIII so that it will read as follows: "The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of \$10.00 per annum." This section of the constitution simply fixes the limit for dues, and the House of Delegates must determine what the amount shall be. It has already been shown that the minimum per capita cost for the Society conducted on its present basis is \$6.10. This estimate is based on one dollar per

capita for the Journal, which does not allow for any enlargement, or improvement with an increased cost of publication, and on the present cost of conducting the Bureau of Public Relations. The appropriation for the Bureau now provides for the employment of a stenographer and for stationery and postage. The amount of publicity matter sent out in any one period must be carefully adjusted to the amount available for paper stock and postage. It is hardly to be expected that any one can be found who can afford, or will be willing to give the time necessary for the management of the Bureau without remuneration—for any extended period at least. So that if this one of the Society's activities is to be developed along the lines laid out, it should be more generously provided with funds.

Taking all of the facts and figures into consideration, \$8.00 per member would be a safe and conservative estimate of the assessment that should be made to meet the needs of the Society.

Each member will decide from his own viewpoint what the Society membership is worth to him. A good many will most certainly underestimate it, especially those who are affiliated with the weaker county organizations, and those who are located in counties having no organization at all, but even in these counties those who are not affiliated must feel some humiliation when they come into contact with other men who enjoy the privileges of a well conducted society, or when they wish to attend some of the large clinics or the meetings of national societies of various kinds.

There are perhaps a few members of the larger county societies who do not fully appreciate the importance of recognition by their fellows in the profession, until by some chance they lose their membership. There are a number

of men in the State who would gladly pay ten times the amount of a year's dues to be admitted to membership. These men have had occasion to find out what it is worth.

In spite of the indifference some of the societies show, medical organization is steadily growing in strength and influence and it will not be long until the physician who is not affiliated will have hard times in the practice of medicine.

Compared with the dues paid in other organizations to which many of us belong, and compared with the annual dues of all but two or three of the other State societies, eight dollars a year is exceedingly small for the privileges and fraternal relations membership in this Society offers.

#### MALTA FEVER IN KANSAS

At the annual meeting of the American Public Health Association held in Cincinnati last October a report of sixteen cases of undulant fever in Michigan was presented by Dr. Paul F. Orr of the Michigan Department of Health, and I. F. Huddleson of the Michigan Agricultural Experiment Station. In the sixteen cases reported the authors of the report considered the diagnosis definitely established. From six of the patients *Brucella melitensis abortus* was isolated from either the blood or urine. The remaining ten had a typical clinical syndrome and gave a specific agglutination with the organism in dilutions varying from 1: 640 to 1: 10,000.

At the time this report was made, the author stated, definite evidence of contagious abortion had been obtained in the herds supplying milk to nine of the sixteen patients, and the *Brucella melitensis abortus* was isolated from the milk supplied to five of the patients.

The evidence in these cases seemed to justify the conclusion that undulant

fever in man is probably caused by the consumption of raw milk from infected cows.

Three cases of undulant fever have been reported in Kansas, all of these from Fort Riley. Dr. Brown has kindly sent us a copy of the report which is here reproduced.

January 10, 1928

Dr. Earle G. Brown,  
Sec. Kansas State Board of Health,  
Topeka, Kansas.

Dear Doctor Brown:

I wish to report the following case for your information.

It is rather a rare condition and one with practically no mortality, but it occurs to us that, since it causes rather prolonged disability and also involves the infection of cattle, it would be of interest in your health work. It appears probable that cattle outside the reservation are also infected.

Name of patient: 1st Sgt. Eddie Harris, Troop F, 2nd Cavalry.

Age: 42 years.

Previous history: Negative.

History of present illness: About July 1, 1927, patient went on furlough and spent two months in Indiana, Kentucky, and Ohio, returning to Fort Riley about September 1st. About September 10th he observed that he was not feeling well and that at times he was feverish, especially during the night. He very gradually became worse, losing weight and suffering from anorexia, headache, nervousness generalized aching of the body and soreness of the tongue. He observed that for a few days he would have fever constantly, day and night, sometimes with profuse night sweats, while for other periods he would have fever only late in the day. The condition gradually grew worse until the patient was forced to quit work and enter the hospital, November 13, 1927, this being the first time that he had come under medical supervision.

In the hospital a very careful physical examination showed little to account for the patient's condition. He was 12 pounds under weight, spleen was just palpable, had several septic teeth and ran



a temperature varying from 98 degrees to 102.2 degrees with a pulse rate of 72 to 96. Urine was repeatedly negative. Blood showed no growth upon culture and the Wassermann was negative. Blood count showed moderate secondary anemia with slight leukopenia (4600-5200) and relative lymphocytosis (29 per cent to 60 per cent). Stool and sputum examinations, x-ray of the chest, and E. E. N. and T. survey was negative. The patient at no time showed any skin eruption or petechiae.

About November 20th, three septic teeth were extracted without any influence upon his febrile condition.

On December 3rd serum was obtained and forwarded to the Hygienic Laboratory and to the Army Medical School for agglutination tests for the abortus-melitensis group and for *B. tularensis*. Reports from these laboratories showed strong positive agglutination reactions to *B. melitensis* and *B. abortus* and negative reactions to *B. tularensis*.

In view of the fact that Sgt. Harris had taken milk for a short time prior to the onset of his illness from Sergeant Harvey Cammaren, 1822 North Jefferson St., Junction City, Kansas, a study was made of his two milk cows. There was no history indicating contagious abortion infection in either cow but blood sera from both cows were positive for *B. abortus* infection.

Sgt. Harris is still running a daily temperature of 99.2 degrees to 100 degrees. All of his symptoms have moderated and he feels comparatively well.

In view of the typical symptoms and positive agglutination tests with Sergeant Harris' serum and with the serum of cows from which he had been using milk, a diagnosis of undulant fever (infection with the abortus-melitensis group of bacilli) was made.

This is the third case of undulant fever that has occurred at this post during the past year and four cows have been found infected. A complete survey of all cattle on the reservation is now being made.

Very sincerely,

(Signed) J. W. GRISSINGER,

Lt. Col., Medical Corps, Surgeon.

It seems reasonable to assume that there have been many other cases of undulant fever in Kansas that have not been diagnosed. Dr. Orr seemed to have no doubt that there had been many other cases in Michigan and stated that "many of the cases of typhoid fever which were not confirmed by laboratory tests undoubtedly were cases of undulant fever. A patient with the latter disease usually runs a temperature varying from 99 to 103 degrees with a regular afternoon and evening rise. This type of fever which begins to extend into the second or third week is strongly suggestive of typhoid."

The fact that this disease may be caused in man by milk from infected cows makes its occurrence in this section of the country a matter of considerable importance. All cases with a more or less chronic recurrent type of fever should be studied carefully and agglutination tests at least should be made. It would be well to make these tests in all suspected typhoid fever cases and in cases of suspected tuberculosis with negative sputum.

#### ANTIVIVISECTION AGITATORS

It seems inherent in some people to be on the opposing side of everything. No matter how important to the welfare of the people a measure may be it will have opponents. The frequently demonstrated value of vaccination in preventing smallpox may have lessened the number of its opponents, but it has not diminished their aggressiveness. These antivivisectionists are the most persistent opponents of advances in the science of medicine. The fact that a great many lives have been saved through the knowledge gained by research and experiments on animals apparently means nothing to them. They are continually trying to prevent by law the efforts of those who

are trying to find out how to prevent disease and death. They apparently think more of the life of a dog than of the health of a community of human beings.

The following is quoted from a letter recently received from Dr. W. C. Woodward, Executive Secretary of the Bureau of Legal Medicine and Legislation of the American Medical Association:

"The New England Anti-Vivisection Society has sent out a form letter announcing its plan to 'introduce into the House of Representatives, at Washington, during the coming session, a bill for the exemption of dogs from vivisection.' The letter requests the addressees to circulate an accompanying petition in support of the bill and to ask his representative in Congress to vote for it. The Society alleges that the 'International Conference for the Investigation of Vivisection, which now includes eighty-six anti-vivisection and humane societies,' is sponsor for the bill.

"Congress cannot directly restrict scientific research in any state. What Congress does, however, will be an important factor in determining action by state legislatures. The anti-vivisectionists are alive to this fact. They therefore seek legislation by Congress, for the District of Columbia and other places under exclusive federal jurisdiction, in order to establish a legislative pattern that the states may be induced to follow. Moreover, it has been frankly confessed on behalf of anti-vivisection interests that if a bill to prevent scientific research involving the use of dogs is enacted they will probably promote legislation to prevent the use of other animals for such research.

"To prevent the enactment of legislation that will hinder scientific research in the District of Columbia and other places under federal control and that will be urged as a pattern for the enactment of similar legislation in your own state, it is important that you file with your senators and representatives immediately protests against the enactment by Congress of the bill now proposed by

the New England Anti-Vivisection Society."

### CHIPS

The next session of the Kansas City Fall Clinics will be held at the Shrine Temple, Kansas City, Missouri, October 9, 10 and 11.

In a paper on duodenal regurgitation published in the Archives of Surgery, January, '28, Olche states that regurgitation of duodenal fluid into the stomach is a constant occurrence and that neutralization of gastric acidity by this regurgitated fluid, the important constituent of which is pancreatic juice, is an important part of digestion. The rate of neutralization can be measured accurately and should be made a part of every gastro-intestinal examination.

Pulmonary abscess following tonsillectomy is of much too frequent occurrence, but there is still some difference of opinion as to whether these are the result of aspirated infectious material or of emboli dislodged during the operation. Allen in Archives of Surgery, January '28, reports some experiments on dogs in which he succeeded in producing multiple abscesses in the lung by the injection into the bronchus of warm pus from patients with chronic abscess of the lung, the dogs being under ether narcosis. Clinical abscesses of the lung are usually multiple and are often confined to one lobe.

Out of eighty-four cases of the lung observed, ninety of the body sillectomy.

The tonsil is not a special organ, but a part of the ordinary sense which has identity through changes in the opinion of E. R. Roberts, Archives of Otolaryngology, December '27. The tonsil is not covered with epithelium. Because of this and its exposed position and the natural tendencies of its structure to attract microorganisms the faucial tonsil offers less resistance to the entrance of infection or the products thereof to any part reached by the circulating body fluids than any other point in the anatomy. There are no rational



contraindications to the surgical removal of the tonsil per se. The reappearance of lymphoid tissue in or about the tonsillar fossa is the reaction of the tissue to traumatism.

In a recent article on lymph nodes of the bronchial tree, published in the Archives of Surgery, January '28, Lerche says: "The lymphatic system is the drainage apparatus of the lung. Inhaled dusts, after entering the pulmonary lymphatics, are carried in the lymph current toward the central depot, i. e., the tracheobronchial nodes, and so are bacteria whether inhaled or blood-borne. On their journey toward the tracheobronchial nodes bacteria may be intercepted and settle in lymphoid masses or bronchopulmonary nodes.

"Much attention has been paid to tuberculous infection of the tracheobronchial nodes, while nontuberculous infections of these nodes have received little notice. Tuberculous as well as nontuberculous infections of the tracheobronchial nodes occurs in both children and adults. The bronchopulmonary nodes have received little attention clinically yet they may be the source of abscesses of the lung. Tuberculous as well as nontuberculous suppuration occur in these nodes. The tracheobronchial and particularly the bronchopulmonary lymph nodes may be potent factors in the causation of bronchiectasis in childhood." *Archives of Surgery*, Vol. 46, No. 1, p. 12.

Physician," (HaRofeh  
In view of the only medical journal published in Palestine which is written in Hebrew, it has just made its initial issue. It is under the editorship of Dr. Moshe Einhorn and Dr. A. Goldenstein. It contains articles on general medical subjects and has a special section devoted to new Hebrew medical terminology. Its office is at 286 West 86th St., New York City.

#### R

Doctor—"You have dementia praecox, madam.  
Mrs. Gatecrash—"It isn't anything old-fashioned, is it, doctor?"

Doctor—"Oh, no. I might say that it's—er—the latest craze."—Exchange.

### Will the Kansas Medical Society Adopt the "New York Plan" for Harmonizing Relations With Voluntary Health Agencies?

C. H. LERRIGO, Executive Secretary  
Kansas Tuberculosis Association

The Kansas Tuberculosis Association recognizes the fact that the whole work of preventing tuberculosis had its origin in the researches and investigations of pioneers of scientific medicine. It realizes its dependence upon the organized medical profession and by a resolution of its directorate has agreed that all of its clinic work shall be guided by state and county medical societies. Since the 1926 resolution of the Kansas Medical Society in reference to free clinics, this Association has been particular to hold no clinics without first notifying the Secretary of the county medical society and asking for indorsement. Not only does it court the guidance and co-operation of county medical societies but it offers to them its nurses and clinic organizers for use in holding chest clinics in any manner meeting with their approval.

Co-operation means willingness on both sides, however. There are but two counties in Kansas from which have come any objection to the clinics conducted by the Kansas Tuberculosis Association. In at least one of these the work has been hindered largely by the opposition of one prominent physician, which opposition is based on prejudice and personal feeling rather than on sound judgment. All doctors who attend the meetings of their own county medical societies know that any man who will take enough interest to oppose a project, especially if he happens to be a man of some standing in his society, can go far to blocking it, whether his stand is right or not.

The Kansas Tuberculosis Association, conceding the right of the medical societies to regulate clinics, points out that the prevention of tuberculosis is a successful piece of social work that has been carried on throughout the United States for more than twenty years. Under the New York Plan as printed in the Kansas Medical Journal for October, 1927, the work of a volunteer society

would not necessarily be hampered permanently because of local opposition. The volunteer health society would have a recourse. It could appeal to its state society and a conference between the state medical society and the state headquarters of the volunteer organization would secure for both organizations fair treatment.

There is another side to the question. The volunteer society may be manned by influential citizens powerful enough to put across, in their own community, practically anything that they indorse. It might be some matter not acceptable to the better judgment of the medical society. In such a case the county society could register an objection through the state medical society that would secure prompt removal of the obnoxious feature whatever it might be, and do this without local friction of any kind.

Most doctors recognize the fact that organized medicine can do no better than to make friends of the general public. This has been particularly demonstrated in Stafford and other counties where the medical societies have held "open meetings" so that the public may have a more intelligent idea of our work. Surely it will be worthwhile to put into effect a plan whereby the volunteer society will secure a medical man to guide it in anything pertaining to medical work and the county medical society will have in its own hands the direction of all enterprises in which the volunteer society puts forth any effort having to do with medical work.

—R—

### **Clinical Laboratory Service in the United States**

Statement by the Council on Medical Education and Hospitals

During the last decade there has been much discussion in medical and laboratory journals and particularly on the platform of medical and laboratory conventions, regarding the status of the clinical laboratories of the country. Especially it was regretted that the practice of clinical pathology, regarded as one of the medical specialties, has fallen into disrepute. The fact was lamented that the laboratory work had fallen into

the hands of lay technicians and become the toy of persons who had a purely commercial point of view and very little training for the work. Much disgust and quite a strong note of despair was sounded by those few members of the medical profession who had championed the cause of clinical pathology and had adopted that specialty as a life work.

Many letters were received at the office of the American Medical Association from practitioners of pathology and leaders in medicine regretting the drift toward lay commercialism, and urging that something be done to counteract it. What to do about it was a question. Organizations of chemists were interested because some of their members ran laboratories. Likewise organizations of clinical pathologists, bacteriologists, and of the medical profession were equally interested. Some of these organizations working alone undertook to investigate and to standardize the practice of clinical pathology, hoping to check the drift of that practice into the hands of technicians and restore it to its rightful place as a medical specialty. The efforts of those organizations working single handed were of little or no avail except to emphasize the enormity of the task and the necessity for co-operation.

#### **CO-OPERATION EFFECTED**

The necessary co-operation of the laboratory and medical organizations was brought about in 1923 at the annual meeting of the American Medical Association in San Francisco. At that time, delegates sent by the American Chemical Society and the American Association of Pathologists and Bacteriologists separately petitioned the American Medical Association to establish some supervision over clinical laboratories. This led to the appointment of three committees representing the American Chemical Society, the American Association of Pathologists and Bacteriologists, and the Council on Medical Education and Hospitals. At a joint meeting of these committees in Chicago early in 1924, after much deliberation, certain basic principles underlying sound laboratory service were agreed upon which stressed especially a qualified bona fide director as the prime essential. The joint com-



mittee agreed that this work could best be conducted by the Council on Medical Education and Hospitals.

The first steps were: (a) to secure a complete list of laboratories in the country; (b) the preparation of a schedule of essentials in an approved clinical laboratory, and (c) the preparation of a questionnaire by which the essential facts regarding each laboratory could be obtained. Each of those measures was carried out with the advice and co-operation of fifty or more clinicians and others expert in laboratory work, including the committeemen of the above-named organizations, and by the officers of the American Society of Clinical Pathologists which very early showed an interest and from which the Council has received a hearty co-operation.

After being revised and adopted by all parties interested, the questionnaire was mailed to all the laboratories of the country and a most hearty response was received. A complete report of the survey, "Essentials of an Approved Clinical Laboratory," and a preliminary list of laboratories which appeared to be fully complying with those "Essentials," were published in the Hospital Number of the Journal for April 3, 1926. The facts as published were submitted to the House of Delegates of the American Medical Association at the Dallas session in 1926 and approved by that body.

To assist in giving as fair consideration as possible to each application for approval, a strong committee of laboratory experts was formed in every state or section of the country. These committees aggregate one hundred and twenty individuals representing, as equally as possible, the co-operating organizations and hence the interests of the laboratory profession. Under the direction of the Council, each committeeman makes his investigation and renders his report or advice independently of other committeemen in the same district.

At the present time, of the three hundred and fourteen laboratories that have reported, one hundred and fifty-one, after careful investigation, have been placed on the approved list and other

applications for approval are constantly being received.

The Council lends all possible assistance to laboratories whereby they may become eligible for admission to the accepted list. Every laboratory that makes a report and signifies a desire to conform to the requirements, is informed in regard to any deficiencies. The spirit of this movement all the way through is constructive. Anyone who knows the condition of the laboratory field at the time this survey was begun, would not expect very telling or spectacular results to be shown by this time; nevertheless, there are ample reasons for believing that actual improvements are being made: (1) A number of laboratories formerly run by technicians and only nominally under "medical" directors, have come under the ownership and actual control of clinical pathologists of high professional standing and ripe experience; (2) a number of laboratories under the control of technicians have gone out of business; (3) the "Essentials" have been published repeatedly and thus brought to the attention of all persons working in the field of clinical pathology; (4) there is an increased demand for pathologists to man the clinical laboratories of the country; (5) the director of the Mayo Foundation says that the salaries offered the pathological graduates of the Foundation are double those offered to other graduates of the Foundation; (6) the feeling of unsteadiness indicated in the discussions of a few years ago has subsided to a considerable degree, and there is a more hopeful attitude on the part of the clinical pathologists themselves.

#### FUTURE OUTLOOK

The movement is still in its beginning, but a good start has been made. To what extent doctors have actually discontinued sending specimens to unapproved laboratories and are sending them to approved laboratories is not known. The educational results, however, are becoming increasingly evident. In order to secure the best analyses for the benefit of their patients as well as to best conserve the interests of the medical profession, physicians should refuse to have their work done at laboratories conducted under the

direction of non-medical individuals. Much depends, also, on the continued hearty support of the various organizations and individuals who operate in the laboratory field. That this is already assured is indicated by the promptness with which laboratories are filling out and returning the form that has recently been mailed out by the Council on Medical Education and Hospitals for a complete and needed resurvey of laboratory service. The resulting data from this survey will be published for the benefit of all. Of course, any laboratories that are not yet on the list, will be promptly considered for approval, if they express such a desire.

### R Council Meeting

The annual meeting of the Council was held in Kansas City, Kansas, January 17th, on the ninth floor of the Huron Building.

The meeting was called to order by the president, Dr. John A. Dillon, at 10:30 a. m.

Those present were:

Dr. John A. Dillon, President.

Dr. Earle G. Brown, Retiring President.

Dr. George M. Gray, Treasurer.

Dr. W. E. McVey, Editor of the Journal.

Dr. J. F. Hassig, Secretary.

Councilors: Dr. C. W. Reynolds, Dr. L. B. Spake, Dr. P. S. Mitchell, Dr. O. P. Davis, Dr. J. T. Axtell, Dr. E. S. Edgerton, Dr. C. C. Stillman, Dr. Alfred O'Donnell, Dr. C. S. Kenney, Dr. I. B. Parker, Dr. C. H. Ewing, Dr. W. F. Fee.

This meeting had one hundred per cent attendance, the first of its kind to be held during the past twelve years.

The president made a talk in which he pledged his best efforts to make a successful year for the society.

The secretary was instructed to prepare a program for a three days meeting, and to secure not to exceed six papers from guests of national or international reputation. The names of several guests were suggested by various members of the council.

It was decided to hold the first meeting of the house of delegates on the first

night of the meeting, and the last meeting on the last day according to the constitution and by-laws.

It was the unanimous vote of the council that the secretaries of the component county societies, members of the council and the editor, would hold a joint meeting at noon on the first day of the meeting at which time a complimentary luncheon will be served to the secretaries.

Dr. McVey made the following financial report of the Journal for 1927, which was favorably received and filed.

#### RECEIPTS AND DISBURSEMENTS BY THE

##### EDITOR

##### Received 1927

|                              |            |            |
|------------------------------|------------|------------|
| Advertising .....            | \$4,872.91 |            |
| Sales and Subscriptions .... | 115.28     |            |
| Other sources .....          | 58.37      |            |
| Kansas Medical Society ....  | 2,000.00   |            |
| Bills due and payable .....  | 133.50     | \$7,180.06 |

##### Expended

|                             |            |            |
|-----------------------------|------------|------------|
| Printing Journal .....      | \$2,277.85 |            |
| Stock and Stationery .....  | 735.85     |            |
| Salaries and Wages .....    | 2,453.33   |            |
| Postage .....               | 143.41     |            |
| Furniture and Fixtures .... | 32.50      |            |
| Multigraph Supplies .....   | 37.85      |            |
| Miscellaneous .....         | 41.05      |            |
| Electrotypes .....          | 152.62     | \$5,874.46 |

Balance .....\$1,305.60

##### JOURNAL STATEMENT

|                              |            |            |
|------------------------------|------------|------------|
| Subscriptions, 1500 Members. | \$3,000.00 |            |
| Sales and Subscriptions..... | 115.28     |            |
| Advertising .....            | 4,872.91   |            |
| Other Sources .....          | 58.37      | \$8,046.56 |

|                             |            |            |
|-----------------------------|------------|------------|
| Printing Journals .....     | \$2,277.85 |            |
| Stock and Stationery .....  | 735.85     |            |
| Salaries and Wages .....    | 2,453.33   |            |
| Postage .....               | 143.41     |            |
| Miscellaneous .....         | 41.05      |            |
| Furniture and Fixtures .... | 32.50      |            |
| Multigraph Supplies .....   | 37.85      |            |
| Electrotypes .....          | 152.62     | \$5,874.46 |

|                             |            |  |
|-----------------------------|------------|--|
| Net Earned .....            | \$2,172.10 |  |
| Bills Due and Payable ..... | \$ 133.50  |  |

Total .....\$2,305.60

On motion Dr. McVey was re-elected as editor for the ensuing year.

A motion by Dr. Mitchell regularly seconded and carried that the editor be allowed on presentation of a statement to the secretary to reimburse him for \$191.72 for the cost of an addressograph which he had personally paid for, and also the price of a new typewriter, which is also to be included in the statement.

Dr. McVey was called upon for a report of the Bureau of Public Relations, since May 1, 1927, to December 31, 1927.



He made a verbal report of the activities of the Bureau, also the following financial report.

## BUREAU OF PUBLIC RELATIONS

## Expended

May 1, 1927 to Dec. 31, 1927

|                         |        |          |            |
|-------------------------|--------|----------|------------|
| Stationery and Printing | ....\$ | 194.50   |            |
| Postage                 | .....  | 188.75   |            |
| Clerk Hire              | .....  | 1,000.00 | \$1,383.25 |

## Received

|                        |        |          |            |
|------------------------|--------|----------|------------|
| Kansas Medical Society | ....\$ | 1,600.00 | \$1,600.00 |
|------------------------|--------|----------|------------|

|                    |         |        |  |
|--------------------|---------|--------|--|
| Unexpended Balance | .....\$ | 216.75 |  |
|--------------------|---------|--------|--|

Dr. Mitchell made a motion which was regularly seconded and carried that the society pay \$25.00 per month to Dr. McVey to help defray his office rent for the extra space made necessary for the Bureau of Public Relations.

The councillor's reports were referred to the May meeting except a special report from Dr. P. S. Mitchell, relative to an appeal from Dr. F. W. Shelton, from the decision of Montgomery County Medical Society, which was discussed and left to the judgment of Dr. Mitchell.

By a unanimous vote of the council a resolution was passed endorsing Kansas for the location of the new Veteran's Hospital which is now being proposed by the Veteran's Bureau.

An itemized expense account of the secretary's, extending from May 1st to the present date, amounting to \$748.55, was read and allowed.

The meeting adjourned just in time for the members of the council to attend, as guests, the thirty-third annual banquet of the Wyandotte County Medical Society.

J. F. HASSIG, Secretary.

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## SOCIETIES

## WILSON COUNTY SOCIETY

The annual meeting of the Wilson County Medical Society was held at Fredonia on December 12. The following officers were elected: President, J. W. McGuire, Neodesha; vice president, C. H. Dewey, Buffalo; secretary-treasurer, E. C. Duncan, Fredonia.

The next meeting of the Society was held at Neodesha on January 9. Dr. C. S. Kenney of Norton was the speaker of the evening. In addition to the regular members there were present: Drs. E. C. Wickersham and J. A. Pinkston of Independence; Drs. L. D. Johnson, J. N.

Sherman, S. G. Ashley, J. A. Butin and P. Follett of Chanute.

Dr. Kenney gave an address at Fredonia at 11 a. m., one at Neodesha at 3 p. m. and another before the District Nurses Association at 4 p. m. After the banquet Dr. Kenney spoke for an hour and a half and there would have been no protest had he continued until midnight. He told of the early struggles in getting the State Sanatorium for Tuberculosis started; of the 1600 deaths from tuberculosis in Kansas in 1913 and of the 147 in 1926. Some reduction. He then spoke of early diagnosis; of the finicky child who eats what he wants and nothing else, but who can be trained to eat the proper things; of the present thin flapper who contracts tuberculosis between the ages of fifteen and twenty at the rate of 175 to 100 boys. Dr. Kenney exudes and overflows with his subject and makes it intensely interesting.

Dr. J. A. Pinkston invited the Society to attend the regular meeting of the Montgomery County Society at Independence on January 19 at which time Dr. Rupe will give a lecture. The next meeting of this Society will be held at Fredonia on February 13.

E. C. DUNCAN, M.D., Secretary.

## MARSHALL COUNTY SOCIETY

The Marshall County Medical Society met at Marysville on Thursday, January 12. After a dinner served at the Pacific Hotel the meeting was called to order and the following officers were elected for the ensuing year: President, J. W. Randell, Marysville; vice president, J. W. Stewart, Frankfort; secretary and treasurer, H. Hearle, Marysville.

The following were admitted to membership: E. P. Bachle and H. Hearle, both of Marysville.

The committee on newspaper publicity made a report.

The subject of rates for collections was discussed by Attorney A. L. Park.

The following papers were presented: "Gastric Ulcer" by Dr. H. H. Woods of Marysville; "That Pain in Right Side of Abdomen" by Dr. J. W. Randell of Marysville. The papers were discussed by all present.

The next meeting will be held on Thursday, February 23, at which time papers will be read by Dr. E. P. Bachle of Marysville and Dr. W. E. Ham of Beattie.

H. HEARLE, M.D., Secretary.

#### STAFFORD COUNTY SOCIETY

Society met Thursday evening, January 12, in St. John. A 7:00 o'clock dinner was served. The attendance was unusual, there being eight members present out of a total membership of eleven.

The doctors were accompanied by their wives and the Society had as guests Attorney Garvin and wife and Representative Gard and wife.

The following resolutions were unanimously adopted:

#### BIRTH CONTROL

Whereas, in the opinion of this committee, the present law relating to Birth Control is unfair to the laity as well as the Medical Profession, at least in so far as physicians are prohibited under any and all circumstances from advising and describing contraceptive methods and means, therefore, we favor an amendment removing that restriction and permitting the family physician to legally impart such information when he deems it advisable and to the best interest physically and morally of his patient.

#### BASIC SCIENCE ACT

This Society heartily approves the draft of the proposed Basic Science Act and pledges its support to such legislative candidates as favor the passage of this act.

The program of the evening was as follows:

Paper—"The General Practitioner's Open Sesame," Dr. J. T. Scott.

Address—"The Proposed Basic Science Act," Representative Gard.

Address—"Birth Control," Dr. F. W. Tretbar.

Address—"Public Medical Meetings," Attorney Garvin.

Representative Gard favored the passage of a Basic Science Act and predicted that such a law would soon be on the statute books of Kansas.

Attorney Garvin thinks that we have, through inviting the public to our

monthly meetings, the ideal means of instructing them as to the difference between quackery and scientific medicine. He says that county medical societies generally should adopt such a program. Advice that is well worth thoughtful consideration.

Dr. F. W. Tretbar gave an interesting and instructive talk on "Birth Control," following which the resolution previously recorded was unanimously adopted. The regular meeting time was changed from the second Wednesday to the second Thursday.

J. T. SCOTT, M.D., Secretary.

#### CLAY COUNTY SOCIETY

The regular monthly meeting of the Clay County Medical Society was held on Wednesday evening, January 11. This being the occasion for the annual banquet for the Clay County Medical Society and the Clay County Dental Society the meeting was held at the Clay Center Country Club. Plates were laid for 55.

The program consisted of an illustrated lecture, "Tiger Trails in Southern Asia," by Dr. Richard L. Sutton of Kansas City, Missouri. It was a splendid program and was enjoyed by all those present.

X. OLSEN, M.D., Secretary.

#### DECATUR-NORTON COUNTY SOCIETY

The annual meeting of the Decatur-Norton County Medical Society was held at St. Francis on December 14. The following program was presented:

Luncheon, 12 m.

Business meeting, 1:30 p. m.

President's annual address—Dr. J. H. A. Peck, St. Francis.

Paper, "Eclampsia"—Dr. E. F. Leininger, Atwood.

Paper, "The Diagnosis and Treatment of Early Renal Infection"—Dr. Harry H. Wear, instructor of Urinology, University of Colorado Medical School.

Paper, "The Consideration of Rheumatism in Children"—Dr. John W. Ames, clinical instructor of Pediatrics, University of Colorado Medical School.

Dinner, 5:30 p. m.—Guests of St. Francis Physicians.



## GOLDEN BELT SOCIETY

A combined meeting of the Golden Belt Medical Society, the Shawnee County Medical Society and the Missouri-Kansas Neuropsychiatric Society was held at the new Menninger Psychiatric Sanitarium, Topeka, on Thursday, January 5.

The following program was presented to a large number of members and guests:

2:00 p. m.—Inspection of the New Sanitarium Building.

3:00 p. m.—Clinical Program.

"Pain as a Symptom of Disease of the Nervous System"—Dr. Henry W. Woltman, Neurological Section, Mayo Clinic, Rochester, Minn.

"Progress in Psychiatry"—Dr. M. L. Perry, Superintendent State Hospital, Topeka, Kansas.

"Medical Economics"—Dr. Peter T. Bohan, Professor of Medicine, University of Kansas Medical School, Kansas City.

6:00 p. m.—Dinner.

7:30 p. m.—Introduction of Neuropsychiatric Guests.

8:00 p. m.—Special Moving Pictures.

## LABETTE COUNTY MEDICAL SOCIETY

The December meeting of the Labette County Medical Society was held at Parsons, Kansas, Wednesday night, the twenty-eighth of December, in the Mathewson Hotel parlors.

Dr. Howard E. Marchbanks, of Pittsburg, Kansas, gave a very interesting discussion of nephritides. The subject included the various diseases of the kidneys and differential diagnosis and cardinal symptoms of each. Subject was freely discussed by all members present.

After Dr. Marchbank's paper, the annual election of officers for 1928 was in order. The following were elected:

N. C. Morrow, M.D., Parsons, President; R. W. Urie, M.D., Vice President; J. T. Naramore, M.D., Secretary and Treasurer.

Board of Censors: J. D. Pace, M.D., Parsons; C. S. McGinnis, M.D., Parsons; O. H. Ball, M.D., Dennis.

Delegate: M. C. Ruble, M.D., Parsons.

Chairman of Public Relations: J. H. Henson, M.D., Mound Valley, Kansas.

J. T. NARAMORE, Secretary.

## LABETTE COUNTY MEDICAL SOCIETY

The Labette County Medical Society convened at the Mathewson Hotel, Wednesday, January 25, at 8 p. m.

Dr. Wayne A. Rupe, Washington University, St. Louis, Missouri, gave the principal discussion on "Pneumonias in Children." He particularly stressed the importance of diagnosis of the wet pneumonia in infancy, also in the bronchial pneumonia in older children.

This paper was discussed by all members present, and proved a very interesting subject for general practitioners, and also the otologist; the latter being on the standpoint of ear infection complicating pneumonia.

About eighteen members were present.

J. T. NARAMORE, Secretary.

—R—

## Deaths

Selden Miner, Oberlin, aged 92, died October 21 of senility. He graduated from the University of Michigan Medical School in 1867.

—R—

## Desiccated Parathyroid Gland Preparations

The general article Parathyroid Gland, in New and Nonofficial Remedies, 1927, states that there is no conclusive evidence for the oral use of parathyroid gland preparations. In 1926 the Council decided to omit all such preparations with the close of 1927 unless in the meantime evidence should develop to show that they were effective. No such evidence has developed. On the contrary, evidence in the opposite direction has become available. Accordingly, the Council directed the omission of all the accepted brands of desiccated parathyroid gland from New and Nonofficial Remedies. (J.A.M.A., January 14).

—R—

## The Dangers of Ultraviolet Rays

Not only do barber shops swindle prospective victims of baldness with incandescent lamps colored purple, not only do electrical corporations sell, as ultraviolet ray devices, contraptions delivering hardly any ultraviolet radiation

at all, but some manufacturers of apparatus actually delivering ultraviolet rays of potency endeavor to place these devices wherever a sale can possibly be made. Regardless of the fact that practically every method in medicine that may do good, can also do harm, these machines are being sold to bath institutes, swimming pools, massage parlors, beauty parlors, clubs, barber shops and innumerable other businesses in which medical supervision is certainly not probable, indeed, hardly possible. The sales are made notwithstanding the fact that scientific literature has already revealed that the rays may in some instances be potent for harm. (J.A.M.A., January 14).

—R—

### **Erusticator**

The A.M.A. Chemical Laboratory reports on the composition of a poisonous rust remover. A physician had reported the death of a baby, who died ten minutes after biting into a tube of "Erusticator." The product is put out by the Sterling Products Company of Easton, Pa. It was not labeled "Poison." Analysis showed that the preparation was essentially an aqueous solution of a mixture of ammonium and hydrogen fluorides (generally designated as ammonium bifluoride) equivalent to 26.3 per cent ammonium fluoride, and 16.9 per cent hydrogen fluoride. The sale of such poison without fair warning to the consuming public is to be deprecated. (J.A.M.A., January 21).

—R—

### **Laxative Action of Bran**

Experiments on the laxative action of wheat bran showed that this was due to the crude fiber (cellulose) which it contains. This crude fiber was found to be feces-forming; it had the power of producing more than its own weight of feces. This presumably takes bran out of the category of drugs and properly relegates it to the kitchen. Indeed, it has been suggested that only through use in the more palatable forms of cookery does bran really "cure" or take care of constipation. Even so, it has many limitations. (J.A.M.A., January 21).

## **CO-ORDINATION OF PUBLIC HEALTH ACTIVITIES**

Among the recommendations made by the Surgeon General in his annual report, he commends a bill introduced in the last Congress for the co-ordination of public health activities of the Government, which provides for a grant of authority to the President to transfer to the Public Health Service any executive agency (other than those in the War and Navy Departments and those in the Veterans' Bureau) when such transfer is deemed to promote greater efficiency in the conduct of public health work. The bill also provides for details of officers of the Public Health Service to other executive agencies, upon request of the heads of departments or independent establishments; for the extension of research through close co-operation with educational and research institutions by an enlarged hygienic laboratory; and for the co-ordination of research of public health officials and scientific workers. Provisions were also contained for unification of terms of appointment of personnel, with compensation and tenure assured to scientific and professional workers adequate to attract to the service, men and women of proved qualifications; and for the enlargement of the present advisory board for the hygienic laboratory into a national advisory health council. The Surgeon General believes that such a co-ordination of public health activities would tend to eliminate duplication of effort in administration, research, and educational measures, and would prove a decisively forward step in public health in the United States.

—R—

He was only a little fellow, of not more than four years, and, as he entered the grocery store, his bare feet made such a slight noise that another customer, who had just been waited on, didn't know of his presence until she turned to go and stepped squarely on one of the small toes.

"Oh, dear, did I hurt you?" she sympathized as she realized her carelessness.

"Gee, no; I'm a Christian Scientist," came the reply, as the boy clasped the injured member in both hands and hopped about on his other foot.



# Frankly---

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## CLINICAL ASPECTS OF JAUNDICE

Charles S. McVicar and Will T. Fitts, Rochester, Minn. (JoJurnal A.M.A., Dec. 10, 1927) assert that textbook classification of jaundice, based on prolonged observation or on necropsy data, are frequently impracticable in clinical work, in which the essential need is to differentiate surgical and nonsurgical cases. The essentials to a working classification are: (1) the reaction of jaundiced serum to the van den Bergh reagent; (2) the height and behavior of the serum bilirubin curve as determined by the van den Bergh or icterus-index methods; (3) the quantity of bile reaching the intestine as determined by siphonage of the duodenal contents, and (4) the presence or absence of pain and its character when present. In differential diagnosis, the size and consistency of the liver, the palpability of the gallbladder, the presence of pruitus, the tint of the skin, the presence of diarrhea, and constipation and loss of weight are all of minor significance. Functional tests of the liver or pancreas have not yet attained diagnostic value in cases of jaundice. The tendency of jaundiced patients to bleed seems to be due in some cases to interference with normal clotting processes, and in other cases to the action of a toxin on capillary endothelium. In some cases in which a tendency to hemorrhage resists the administration of calcium or transfused blood, there may be spontaneous restoration of the factors which prevent hemorrhage. The prophylaxis of hemorrhage is thus summarized: 1. Routine administration of calcium chloride, 0.5 Gm. given preferably in 150 cc. of sodium chloride solution on three successive days. Dilution of the calcium solution and washing out the peripheral vein with sodium chloride solution following it will avoid thrombosis. 2. Transfusion, if prolonged coagulation time persists in spite of calcium administration, or if purpura is present. 3. Postponement of operation if these measures are not effective, and, if necessary, repetition of medical measures. 4. Frequent estimations of coagulation time by the Lee method, since this may reveal a tendency to spontaneous correction of delayed clotting.

## RELAXATIVES

✱ ✱ ✱

A man too busy to take care of his health is like a mechanic too busy to take care of his tools.—Cicero.

✱ ✱ ✱

The nightingale is no more interesting than the midnight cat to the man who wants to sleep.

✱ ✱ ✱

The secret of life is not to do what one likes, but to like to do what one has to do.—Hale.

**FOR SALE**—Hanovia Ultra Violet Lamp, air cooled. Practically new. Price Right. Inquire Dr. W. H. Iliff, Baxter Springs, Kansas.

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## RELAXATIVES

\* \* \*

Landlady—"Would you mind, sir, having tea this morning? I'm sorry to say the coffee is quite exhausted."

Boarder—"Quite exhausted? I'm not at all surprised. You know, it's been in a very weak condition for a long time."

\* \* \*

An Irish witness was being examined as to knowledge of a shooting affair.

"Did you see the shot fired?" the magistrate asked.

"No, sorr; I only heard it," was the evasive answer.

"The evidence is not satisfactory," replied the magistrate sternly. "Stand down!"

The witness turned round to leave the box and directly his back was turned he laughed derisively.

The magistrate, at this contempt of court, called him back and asked him how he dared to laugh in court.

"Did you see me laugh, your honor?" queried the offender.

"No, sir, but I heard you," was the irate reply.

"That evidence is not satisfactory," said Pat. And this time everybody laughed.

\* \* \*

Visitor—"So you have triplets at your house. Has your father names for them yet?"

Willie Willis—"Yes; but I don't think any minister would baptize them with what pa calls them."

\* \* \*

A Pennsylvania town is advertising for a drug store. It seems the regular restaurant has closed down.—Detroit News.

\* \* \*

About the only thing that will really stop falling hair is the floor.—Publishers Syndicate.

\* \* \*

A woman in Cleveland claims the baby given her by hospital authorities isn't the child she thought it was. Many parents have a similar experience, only seventeen or eighteen years afterward.—Detroit News.

\* \* \*

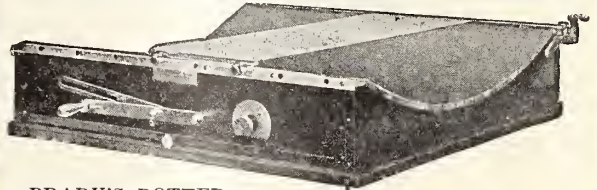
"Oh, doctor, I have sent for you, certainly; still I must confess that I have not the slightest faith in modern medical science." "Well," said the doctor, "that doesn't matter in the least. You see, a mule has no faith in the veterinary surgeon, and yet he cures him all the same."

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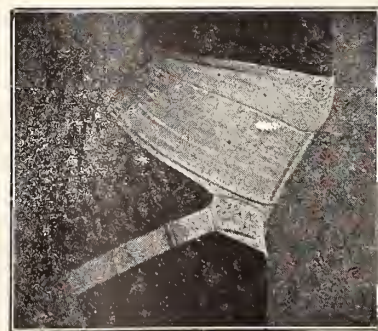
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## RELAXATIVES

\* \* \*

## A HOT LETTER

John Campbell opened his mail one warm day in August and found the following in it:  
Gentlemen;

I get the pump which i by from you, but why for gods sake doan you sen me no handle. I loose to me my customer. Shure ting you doan treat me rite. I wate 10 days and my customer he holler for water like hell for pump. You no he is hot summer now and the win he no blow the pump. She got no handle so wat the hell i goan to do with it. Doan sen me the handle pretty quick i sen her back and i goan a order some pump from other companie.

Goddby

your truly

ANTONIO DUTRA

p. s. Since i rite i fin the goddam handle in the box excuse to me.

\* \* \*

Motor Cop (after hard chase): 'Why in h—— didn't you stop when I shouted back there?'

Driver (with only five bucks, but presence of mind): "I thought you just said 'good morning, Senator'."

Cop: "Well, you see, Senator, I wanted to warn you about driving fast through the next town-ship."—Selected.

\* \* \*

Several traveling men in a Chicago hotel were one day boasting of the business done by their respective firms, when one of the drummers said:

"No house in the country, I am proud to say, has more men and women pushing its line of goods than mine."

"What do you sell?" he was asked.

"Baby carriages," said the drummer as he fled from the room.—R. O. F.

\* \* \*

Lady (to clerk)—"I want to buy some lard."

Grocer—"Pail?"

Lady—"I didn't know it came in two shades."

\* \* \*

I believe that the members of the dental profession are the only men who can tell a woman to open or close her mouth and get away with it.—Chicago Daily News.

\* \* \*

We imagine there isn't much difference between psychoneurosis and nervousness, except in the matter of the bill for diagnosis.—Ohio State Journal.

\* \* \*

Patient—"That absent treatment you have been giving me doesn't seem to have done me much good."

Healer—"No wonder. You forgot to tell me you moved."

## TWELFTH ANNUAL CLINICAL SESSION

of the

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# THE JOURNAL

of the

## Kansas Medical Society

VOL. XXVIII.

TOPEKA, KANSAS, MARCH, 1928

No. 3

### Some Diagnostic Points in Thrombo-Angiitis Obliterans.

L. V. HILL, M.D., Kansas City

Paper read before the Kansas State Medical Society at Hutchinson, Kansas, May 4, 1927.

Diseases of the vessels of extremities, without specific cause, such as syphilis, Bright's disease, diabetes, etc.; occurring in younger persons have long been grouped together as presenile spontaneous gangrene. Such a classification rests, however, on clinical grounds only, and takes no note of the vessel changes, or absence of changes, present in the affected limb. So much confusion exists that many clinicians believe that they are all part and parcel of the same affection. I shall attempt to show from an analysis of the literature that Thrombo-Angiitis Obliterans has a clinical, pathological and symptomatic identity.

It will be necessary to first review those diseases and symptom complexes with which it has been submerged and then to point out wherein it differs from them in pathology, physical manifestations and symptomatology. The diseases which I shall mention in this connection are acroparesthesia, scleroderma, sclerodactylia, erythromelalgia and Raynaud's disease. All but the last mentioned being rare or unknown in the practice of most of us we shall pass over them with a brief summary of their important features but Raynaud's disease will require careful analysis as it has been the principal stumbling block to a clear understanding of Buerger's disease.

You will note that the clinician is in the majority of these syndromes unaccompanied by the pathologist.

Erythromelalgia or red neuralgia, first described by Wier Mitchell<sup>1</sup> in 1872, is a rare disease affecting one or more extremities, usually the lower, and is characterized by pain, flushing and local fever and aggravated by letting the limb

hang down. Excision of the nerves of supply has given relief. Nine cases were studied anatomically by Batty Shaw<sup>2</sup> and the only constant change was a chronic endarteritis. Mitchell reported in his case that the veins were singularly enlarged and that the arteries were throbbing visibly.

Acroparesthesia described by Schulze<sup>3</sup> in 1892 is a condition characterized by a tingling, crawling sensation in the fingers, sometimes by hyperesthesia or hypesthesia of unknown pathology but the arteries, veins, and nerves are normal.

Scleroderma is a condition characterized by induration of the skin, either diffuse or localized and of unknown origin but the pathology is thought to be dependent on changes in the arteries of the skin.

Sclerodactylia is a dystrophy belonging to the same order.

Raynaud's disease, first described by him in 1862<sup>4</sup> as "a vascular change without organic disease of the vessels, usually in the extremities but occurring in other vessels and characterized by a persistent ischemia or passive hyperemia, resulting in loss of function or sometimes gangrene," is not associated with diseases of the vessels. Osler<sup>5</sup> defines it as "a vascular change without organic disease of the vessel; chiefly seen in the extremities, but occurring also in the internal parts, in which a persistent ischemia or passive hyperemia leads to disturbance of function or to loss of vitality with necrosis." He further states that "in advanced cases sclerosis of the blood vessels has been found and neuritis has been described, but neither is an essential factor. Changes in the spinal cord have been reported but in a majority of all cases the examination has been negative."

The oldest recorded case of Raynaud's

disease was noted by Bernhard<sup>6</sup> and reported in 1629. A student of surgery stopped at an inn where the inn-keeper's daughter, who was twenty-three years old, had considerable pain in her fingers and toes, in her ears, and on the tip of her nose. There was edematous swelling of her hands, feet and face followed by "mortification" and the ends having become white and dry, dropped off in pieces without feeling pain, moisture or bad odor.

Buchanan<sup>7</sup> has recently reviewed 67 cases occurring in the Mayo Clinic. He classifies the local disturbances as (1) changes in color and nutrition (2) changes in sensation (3) changes in the motor system and (4) changes in bones. The changes in the color are white, blue, red, and black, which have received the clinical designations of local syncope, local asphyxia, local hyperemia, and gangrene. The term "local syncope" was introduced by Raynaud for the first stage of the disease and by it meant a sudden blanching of the part. The temperature is lowered in the part affected and is said by Buchanan often to be from 27° to 36° F. This stage may last from hours to days and may be succeeded by the blue stage or local asphyxia. These attacks are paroxysmal recurrent and are marked by frequent sudden changes in color. The involvement is symmetrical though the fingers are not involved in the same degree on each side. The skin appears dusky, the color varying from light reddish purple to dark bluish black. The attacks may last from light reddish purple to dark bluish black. The attacks may last from weeks to a month and then disappear. If the asphyxia persists for a year a false edema results due to the predominance of cellulo-adipose tissue from under nutrition. The third, red stage of local hyperemia is rare and was not seen by Raynaud. It may follow the first stages of syncope and asphyxia but is never seen alone. The arterial pulsations are increased and with the local hyperemia there is an increase of local temperature.

The fourth stage is gangrene which may or may not be symmetrical. Many cases do not proceed to this stage as is

evidenced in that of 67 cases reviewed by Buchanan but twenty-five had gangrene, though the duration of the disease had been long in most cases. (62 had had the disease 5 years or more; 32 more than 10 years; 17 over 15 years; 6 over 20 years; and one over 40 years).

Pain was described by Raynaud as an almost constant accompaniment and as Cassirer<sup>8</sup> has pointed out, it is neither of spinal nor peripheral distribution. Accompanying the syncope and asphyxia there may be a paroxysmal sharp pain or a painful numbness followed by burning and shooting. In Buchanan's series, intense pain was present in 17, 20 had numbness, 11 tingling, 9 sharp pains, and 9 burning. The remainder (21) had pricking, itching, and soreness. Diminished tactile sensation is frequent, analgesia occurring in two cases. The chief motor symptoms are slowness and clumsiness especially in the small movements. Cassirer was the first to report bone changes. He observed thinning of the cortex with increase in the marrow space and sharpening of the canalicular outlines. The systolic blood pressure is unaffected, being normal in 21 per cent, increased in 49 per cent, and below normal in 18 per cent. The pulse was normal in 12 of 26 cases, slowed in 10, and increased in 4 cases. Although cold is said to be the exciting cause, 21 out of the 67 showed no such tendency, though it was the exciting factor in 31, cold weather 7, cold and emotion 2, emotion 5 and autumn 1. Buchanan considers after his review that there is no essential pathology of the vessel walls but that the symptoms indicate a disturbance of vasomotor control, a view recently concurred in by Hirsch<sup>9</sup>.

The pathological picture of thromboangiitis obliterans may be briefly described as an acute inflammatory lesion involving the artery, vein and nerve, giving rise to occlusive thrombosis of both artery and vein. Large territories of the distribution of the vessels become rather suddenly occluded by a bright red thrombus and the disease thus proceeds by exacerbations and apparent remissions when there is, second, organization or healing, disappearance of the cellular in-



filtration of the vessel walls, organization and cancellation of the clots and disappearance of the inflammatory products only to be followed in the older lesions by the development of fibrotic tissue in the adventitia which binds together the artery, vein and nerves.

On anatomical dissection of the vessels of an affected limb the veins are found equally diseased with the arteries. The thrombotic masses in the vessels may be long involving large territories of their lumens or short, affecting but a short space with, in either case, an apparently normal vessel both above and below. The distal portions are affected rather than the proximal but the arterioles and capillaries are never affected and oftentimes the popliteal is normal. As an affected vessel is opened from above downward we may see a soft reddish cone like process projecting into a normal vessel, lower down it becomes more brownish in color gradually becoming grayish or yellowish and much firmer in consistency. The vessel is usually smaller than normal making the walls appear thicker, the obturating mass is firm, round, and completely fills the lumen, and does not resemble the crescentic or simulunar masses seen in arterio-sclerosis. Piercing the obturating mass are one or more minute openings from which a drop of blood can be expressed.

Histologically Buerger<sup>10</sup> reports that at the termination of the red thrombus there is a fairly recent clot filling the lumen with no change in the vessel wall. Farther down the clot is adherent in places and there is some infiltration and beginning vascularization of the media. In the periphery of the clot pus cell foci may be seen giving way lower down to giant cell foci produced by the attempt at vascularization of the pus cell foci. Farther on, these fade out, the cellular infiltration of the media and adventitia is marked and many capillaries are seen coming in from the adventitia. Still farther on, the capillary sprouts become longitudinal in direction, are seen to connect here and there with the media, and are surrounded by numerous round cells, fibroblasts and some blood pigment. This accounts for its brownish color in

this area and corresponds to the fairly firm brownish occlusion noted before. Lower down the cells of the clot disappear, the connective tissue is dense, and in the center are one or more sinuses containing blood.

On serial section, where a single lumen was present simulating an obliterating endarteritis Buerger<sup>11</sup> found in all cases it divided and communicated with the intima. In 20 per cent of Buerger's cases there was associated a migrating thrombo phlebitis of the superficial veins, which presented on section histological findings identical with those of the deep vessels. In 1920 he was able to show that the leucocytes of the pus foci came by way of the media and do not represent cells of the clot aggregated together. Thickening of the intima of the small arteries was observed but never sufficient to cause marked narrowing of the lumen.

The perivascular changes consist of proliferation of connective tissue, in some of recent origin, in others of an old fibrotic process which is stationary and in all cases the fibrosis is apparently comparable to the intensity of the vascular disease.

Thus it is evident we are observing a disease which is not an endarteritis because the small vessels, the arterioles and venules are never occluded, and because in those instances where the picture seems to resemble obliterating endarteritis the lumen can in all cases be found on serial section to divide and communicate with the intima which the capillary sprouts have pierced when the original clot was cancelled. It differs from arterio-sclerosis in that it occurs in young individuals, is accompanied by a low blood pressure, is an acute process of an inflammatory nature as is evidenced by the infiltration of the vessel walls and the pus foci within the contained clot; in the absence of the large obliterating plaques with a large amount of connective tissue in them, with the fibres mostly parallel with and passing into the internal elastic lamina so typical of arterio-sclerosis, and finally in that the popliteal artery is often normal while in arterio-sclerosis it bears the most marked lesions of the disease.

The clinical symptoms were admirably described by Buerger<sup>12</sup> in 1920. Of the onset of the disease he says that in but a few of his then 300 cases could he ascribe certain symptoms to the incipient stage. "Severe, nonlocalized shooting pains in the calf or foot, attended with difficulty in walking or possibly with tender calf muscles, with or without vaso-motor symptoms and coldness in the foot, with or without obliteration of the dorsalis pedis, and posterior tibial pulses may be the only symptoms. It is only when the history with the subsequent clinical course is compared that such symptoms can be associated with the primary onset of the disease. In most instances the patient either does not consider his symptoms sufficient for advice or they are ascribed to rheumatism, flat-foot, etc." He concludes that clinically unrecognizable exacerbations occur from time to time and the obliteration progresses until the clot reaches the popliteal or even farther. Occurring in very young individuals in whom the cardiac power and vis-a-tergo can compensate and where the vascular elasticity is adequate for free anastomotic circulation it is not surprising that gangrene occurs late.

In 1909 Buerger<sup>13</sup> reported the association of migrating phlebitis of the superficial veins in 20 per cent of cases. It may give no symptoms being manifested by indurated cords one-half to four inches long which are indicative of acute thrombo phlebitis and perivascular infiltration of the larger veins or when the cutaneous tributaries are affected presenting themselves as small nodosities. In other cases superficial thrombo phlebitis dominates the clinical picture. Usually by the time the patient presents himself for treatment the disease has progressed to the second or healed stage. Here the symptoms are dependent on vascular obstruction and in one type of cases there are rather characteristic attacks of ischemia, patients being able to walk but a short distance before paroxysmal, shooting cramplike pains occur in the calf of the leg which compels them to stop short. After a short rest they are usually able to proceed, only to be

stopped again by similar pain. They complain of indefinite pains in the foot, calf of the leg, or toes and particularly of a sense of numbness or coldness whenever the weather is unfavorable. Both feet are found to be blanched and cold to the touch and there is an absence of pulsation in the dorsalis pedis or posterior tibial artery. When the foot is warmed some color gradually returns. After some months, or possibly a few years, trophic disturbances appear in the form of thickening of the skin and subcutaneous tissues, evidence of malnutrition, edema, atrophy, fissures, ulcers, bullae, ecchymoses, or gangrene. With the appearance of trophic disturbance usually on the great toe, more often near the tip and frequently under the nail, pain becomes intense. In some instances the lesion progresses but slowly and may last for months with intermissions and exacerbations of pain and destructive process; in others the member soon shows cyanosis and dry gangrene follows. Even before the death en masse of the part, amputation may be forced by the severity of the pain. Although the left leg is usually first affected, vascular disturbance may be apparent in both simultaneously and the trophic disturbance, redness and ischemia be considered Raynaud's disease by the physician.

It is quite well agreed among investigators that the disease is not associated with syphilis. Goodman<sup>14</sup> found in a series of cases the Wassermann reaction was almost always negative. Franenthal reports that in his series of 171 cases only 7 gave a positive Wassermann while in other diseases the average was 15 per cent to 20 per cent. Buerger and Kaliski<sup>15</sup> report that in 29 consecutive cases in 17 of which one extremity had been amputated and shown pathologically to be thrombo-angiitis obliterans the Wassermann was negative. The ultimate diagnosis of thrombo-angiitis obliterans rests chiefly on the finding of pulseless vessels in one or more extremities. In this, our chief causes of confusion are those obliterations of arteries due to diabetes and arterio-sclerosis. In arterio-sclerotic disease the age of the patient together with the condition of



the other vessels should be the chief guides, and the blood pressure findings should prevent us from error. In diabetes the urinary and blood chemistry findings together with the history should make identification easy. Raynaud's disease has been the chief cause of error in diagnosis, in the past, due to the fact that it has not been sufficiently accepted generally that in Raynaud's disease even when gangrene is present in the toes or tips of fingers, the large arteries may be pulsating vigorously. The circulatory disturbance is in the arterioles, venules, and capillaries while in Buerger's disease the smaller blood channels are unaffected. Raynaud's gives alternating flushing and blanching and heat or cold may relieve the spasm. Ulcers in Raynaud's yield to treatment; ulceration in Buerger's progresses. In Raynaud's the vessels are only temporarily closed, the attacks subside, the course of the disease does not increase, the attacks are often symmetrical, may affect the ears and nose, change of posture does not affect the extremity, it is more common in women than men; may occur in very young and often and usually follows exposure to cold while the same is not true in Buerger's disease. In addition a migrating phlebitis of the superficial veins is seen in 20 per cent of cases of thromboangiitis obliterans.

Erythromelalgia likewise as in Raynaud's shows no alteration in the patency of the vessels, and Mitchell contended that it was never followed by gangrene. Resection of the sensory nerves of supply has given permanent relief but cures by such procedure are not reported in Buerger's.

Scleroderma and sclerodactylia are to be differentiated by the history and the pulsating posterior tibials and dorsalis pedis arteries. The pathological changes in them are due to hypertrophy of the connective tissue of the corium which is followed by pressure atrophy of the skin vessels and epidermic structures. Scleroderma is more frequent in women and more commonly involves the breast and neck. In the diffuse form, in a given case affecting only the hands, where difficulty in diagnosis might arise, the pa-

tient complains of stiffness and tension in hand movements and there is a brawny induration not pitting on pressure. In sclerodactylia the fingers are symmetrically involved and become deformed, shortened, and atrophied due to the same connective tissue overgrowth with stragulation of the superficial vessels.

Buerger's routine examination in suspected cases of thromboangiitis obliterans consists of:

1. Inspection in the horizontal position, first as to redness, pallor or cyanosis, and second as to evidences of malnutrition such as atrophy, ulcers, bullae, fissures, ecchymosis, thickening of the skin and subcutaneous tissues or effacement of the normal contour of the extremity by edema.

2. The limb is now changed to the pendant position, noting if a red flush appears on the toes and spreading up the dorsum of the foot, if present, denoting reduced circulation from vascular obstruction due to increased capillary circulation in an effort to compensate for the reduced blood supply.

3. The limb is next elevated toward the vertical and the presence or absence of ischemia is noted. Its extent and rapidity of appearance, if present, indicating the amount of obstruction, as normally there is no ischemia on elevation of the limb. In order to make comparisons and as a measure of obstruction he estimates what he terms the angle of circulatory sufficiency, the vertical position of the limb being considered one hundred and eighty degrees, the horizontal ninety, and the pendant zero. The foot is raised to the full vertical and if blanching appears the extent and rapidity is noted and as it is slowly lowered through the arc of one hundred eighty degrees, the angle at which the color returns is the position of the leg in which circulation is apparently sufficient. The presence or absence of pulsation in the palpable vessels is then noted.

He next notes the occurrence of reactionary rubor or as he terms it "erythromelia." Normally hyperemia follows immediately on removal of a tourni-

quet but where obstruction is present in many of the territories of arterial supply it is correspondingly delayed. Blanching occurs in occluded artery cases on simple elevation, hyperemia appearing when the limb is lowered.

The patency of the superficial veins, they being external to the deep fascia and accessible to the touch, is easily determined and a careful questioning of the patient would inform us as to the presence of a previous thrombo phlebitis.

Buerger uses the following test for patency of the deep veins. "Allow the limb to hang, watch for the advent of erythemia and wait until a fair degree of cyanosis has become established. This may take five or ten minutes. The veins are then obliterated above the knee by means of a Martin bandage properly applied. The limb is then raised high and the bandage loosened just enough so as to remove pressure from the deep, but not from the superficial veins. If the cyanosis is slow in disappearing, or fails to disappear it may be concluded that the function of the deep veins is impaired." In cases where arterio-venous anastomosis is to be attempted, patency of the deep vessels is of course of supreme importance.

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#### Safety in Surgery

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There has been a tendency in the past decade to turn more and more to the laboratory for diagnosis and prognosis. The laboratory findings in a surgical case are of very great importance coupled with clinical findings. The presence of the laboratory, however, should

not prevent one from using what other means he has at his command in the evaluation of a surgical risk before the patient comes to the operating table, and in caring for him until he is well. After a patient has been examined in the usual way by both the general practitioner and the surgeon with the laboratory findings taken into account, we realize that we still have an unknown quantity to deal with, namely, the individual resistance of the patient. It is the purpose of this paper to present a few points that we believe will materially aid in making a prognosis and in decreasing the risk. The methods should be simple, and must not consume too much time as time is often valuable. The answer to the problem seems to lie in the use of some of the ordinary instruments of precision that are at the command of both the general practitioner and the surgeon. Mere machinery and laboratories can never supplant sound judgment and experience but we welcome anything that will give added data in the estimation of a surgical risk and in averting disaster. "Safety First" has been a slogan for years in the industries and may well be applied to surgery.

The International Anaesthesia Research Society has established certain essentials in preventing needless deaths in its uniform anaesthesia record. These are:

1. The determination of surgical risk before operation.
2. Five-minute blood pressure guides and protection during the entire operative period.
3. Remedial therapy and aftercare based on the degree of circulatory depression.

Surgical risks have been classified by A. H. Miller in 1000 unselected cases into A, B and C risks with comparative death rates as follows:

A. Good risks; patients free from organic disease whose surgical condition is not likely to prove dangerous.

B. Fair risks; patients suffering from organic disease but whose surgical condition is not likely to prove dangerous.

C. Poor risks; patients whose surgical condition or organic disease (or both)



is so serious or so far advanced as to likely result in fatality.

A. Risks, cases 734. Deaths 2. Death rate .2%  
 B. Risks, cases 179. Deaths 14. Death rate 7.82%  
 C. Risks, cases 87. Deaths 29. Death rate 33.33%  
 A summary of the total gives  
 Cases 1000. Deaths 45. Death rate 4.5%

These figures give a fair prognosis as to what the result of an operation is to be if we can obtain more accurate data as to where to place the patient in the classification.

Moots' Index for Operability is important and is found by dividing the diastolic pressure into the pulse pressure and thus securing the pressure ratio per cent, or the index of operability.

$$\frac{\text{Pulse Pressure}}{\text{Diastolic Pressure}} = \text{Pressure ratio \% or index of operability.}$$
  

$$\frac{40}{80} = 50\% \text{ Normal } \frac{75}{100} = 75\% \frac{20}{80} = 25\%$$

Moots rule: If the pressure ratio is high or low there is reason to apprehend danger. If the pressure ratio lies between 25 and 75 the case is probably operable.

A newer and probably more dependable index for forecasting shock before operation is the one worked out by Froes and Declairfayt. This is obtained by multiplying the systolic pressure by 100 and dividing the product by the hemoglobin percentage multiplied by the figure representing the hundred thousands of erythrocytes. For example a patient with a systolic pressure of 170 mm. Hg., erythrocytes 3,600,000 and a hemoglobin of 67 per cent the formula would be:

$$\frac{170 \times 100}{36 \times 67} = \frac{17,000}{2412} = 7 \text{ plus}$$

This numeral 7 seems to be the extreme limit for safety, and when the product is beyond this figure shock is almost inevitable. This is a simple and available index and seems worthy of routine use in preparing for shock in advance.

The evaluation of the reserve vitality from the circulatory viewpoint brings out the significance of the pulse rate. To obtain a more accurate determination the energy index is used. This is the sum of the systolic and diastolic pressures times the pulse rate:

$$\text{Systolic} + \text{Diastolic} \times \text{Pulse rate} = \text{Energy Index or}$$

$$120 + 80 \times 72 = 14,500 \text{ mm. Hg. per minute}$$

Here the numerals of the thousands only

are used as the Index giving an index of 14 plus.

TABLE OF OPERABILITY

| Condition        | Energy index | Index of Operability |
|------------------|--------------|----------------------|
| Increasing       | 0 -6         | Probably inoperable  |
| Cardiac weakness | 6-12         | Probably operable    |
| Normal           | 12-18        | Safely operable      |
| Increasing       | 18-24        | Probably operable    |
| Circulatory load | 24-30        | Probably inoperable  |

Note. In this index the systolic pressure and pulse rate show heart capacity and the diastolic and resistance in terms of mm. of Hg. expended for each minute.

The breath-holding test is one requiring no other equipment than a watch, is simple, and gives useful information on the acid-base balance of blood and tissue chemistry. It is a method of evaluating operative risk in terms of reserve vitality. Directions for giving this test are given by Yandell Henderson as follows:

1. Sit down for five minutes.
2. Take a full, but not too keep breath.
3. Hold it with mouth and nostrils closed.
4. Note time, (breath is held) in seconds.

The breath should be held normally about forty-five seconds and men who could not hold their breath forty-five seconds were rejected as unfit in the French Aviation Service.

This does not mean that a patient must be able to hold the breath the full forty-five seconds to be operable, but that as the time decreases there is threatening alkalosis, acidosis, or aminosis. The breath-holding test runs parallel with vital capacity and for clinical purposes it may be calculated that the breath-holding time in seconds times one hundred gives the vital capacity in cubic centimeters. The normal vital capacity for a male is now considered to be about 3500 c.c. and for a female about 3000 c.c. Upon obtaining a breath-holding test of 10 or 15 seconds we have indication of a vital capacity of 1500 c.c. or less and hence a grave anaesthetic risk. The test is so simple that it can be used as routine for minor operations in the office of a physician or dentist where many poor risk patients will walk in apparently in good health.

In taking the breath-holding test one bears in mind that breathlessness has different origins. The Cornell test is

useful in differentiating the cardiac dyspnea from the acidemia of incipient nephritis. Cornell has shown that in most cases where an undisclosed nephritis has been present under three years there is a non-cardiac form of dyspnea associated with mild exertion. After exercise the pulse and respiration rise rapidly in these patients; the pulse rate falls to normal almost at once while the respiratory rate comes back to normal only after seven or eight minutes. Cornell's findings in these cases are as follows:

1. Although not more than 20 per cent of these patients complain of dyspnea, 95 per cent admit having it when questioned.

2. This dyspnea has no accompanying cyanosis and is usually relieved by four twenty-grain doses of sodium bicarbonate.

3. Fifty per cent of patients note red, blue, green, or prismatic color change of the white electric bulb during this sort of dyspnea.

4. The degree of dyspnea coincides more closely with the acidemia of the respiratory center than the phthalein output.

This test anticipates post-operative kidney dysfunction before the patient comes to the table.

The Cardio-Respiratory Apparatus was devised by the medical department of a life insurance company for the determination of the functional capacity of the cardio-vascular system. A type of cardio-vascular test was used by McIntire for evaluating certain types of vagotonic and sympathicotonic patients in relation to therapy and operability. McIntire made his test by noting blood pressure changes while the patient held the breath for thirty seconds. The cardio-respiratory test as done with the apparatus is based on variation of blood pressure while the patient is changing the intrathoracic pressure by holding the breath after inhalation and exhalation, and by blowing or sucking steadily against resistance.

The outline of the steps in this test is as follows:

1. Initial notation of systolic and diastolic pressures, pulse rate and rhythm.

2. Full inspiration held ten seconds.

3. Full expiration held ten seconds.

4. Blowing against pressure guage, holding 40 mm. positive pressure for ten seconds.

5. Sucking against pressure guage, maintaining 2.5 mm. negative pressure for ten seconds.

- 6, 7 and 8. Expiration to full capacity through spirometer noting vital capacity and blood pressure at each of these steps.

9. Terminal notation of pulse rate and rhythm, blood pressure and physical signs.

A chart is made of these variations as they are taken and with a little practice one becomes familiar with the normal and is able to detect variations that cannot be determined by other methods. While the test comprises nine steps it is not time consuming and can easily be finished in ten minutes, in fact must be finished in that time in order to give proper readings. McIntire found that in patients suffering profound mental depression following septic and toxic conditions the vagotonics showed serious drops in the systolic pressure during breath holding. The vagotonic reaction is reversable by the use of atropin and thyroid therapy and this test may be used to disclose those patients whose adrenalin reserve is not sufficient to withstand operations safely without preliminary atropin and thyroid therapy. It is well known that a major operation throws a great strain on the cardio-vascular system; occasionally this strain costs the patient his life. A fatal termination for this type of patient indicates the gravity of the condition of the cardio-vascular system was unrecognized. We believe this test with the use of the apparatus has a much larger field in revealing unsuspected conditions, and of more importance the degree of compensation of the heart in the presence of known or unknown organic disease. Most surgeons believe that cardiac abnormalities that cannot be detected by the ordinary physical examination are not organic but functional and treat them with the same contempt which they give to functional nervous diseases.

Conversely it is immaterial how loud



a murmur is in a patient's heart so long as the lesion is compensated and the heart has sufficient reserve to function adequately during the stress of a major operation and the post-operative period. The cardio-respiratory test applies a strain that can be measured, controlled, increased or decreased as the physical condition of the subject may require and may be duplicated as necessary. It can be applied to a man of sixty, a frail woman or an athlete. It should never be used where a history is given of angina pectoris or severe tachycardia and one should be wary in advanced hypertension.

These tests while they give useful and accurate information must be coupled with the other known factors in the proper estimation of risk. Some of these are: extremes of age, variation of weight and height from the normal, nature of the operation, time required for operation, and whether the operation is elective or emergency. The laboratory findings, too, must be given due consideration. But with all of these properly evaluated, what happens during the operation may change the risk materially. For this reason the five minute blood pressure guide is very valuable. In the interpretation of the blood pressure changes the following is given by the Anaesthesia Research Society.

1. Safe: Fifteen per cent increase in pulse rate without increase in blood pressure, or ten per cent decrease in blood pressure without decrease in pulse rate.

2. Dangerous: Twenty-five per cent increase in pulse rate plus ten to twenty-five per cent decrease in blood pressure.

3. Shock: A pulse rate of one hundred and rising with progressively falling blood pressure reaching a systolic of 80 mm. and a pulse pressure of 20 or less.

This is really an adaptation of Gibson's law which states that when a rising pulse and falling blood pressure cross the patient is in danger. Shock occurring on the operating table must be combatted promptly in order to eliminate danger. If it continues over thirty minutes without effective remedial measures death is almost certain within seventy-two hours. Prolonged shock following wounds was

one of the chief causes of death in the world war. That in many cases could not be changed due to the lack of facilities on the field. In the hospital it can usually be controlled if the surgical team is apprized of the danger in time. The blood pressure guide discloses the onset of shock on the operating table about twenty minutes before it is indicated by other symptoms and thus gives time for remedial therapy.

It may be said that these tests require too much time. When Lister perfected his antiseptic technic the surgeons who visited his clinic commented: "This elaborate method is possible in Lister's operating room because of the unusual energy, care, and enthusiasm present there: but such infinite care of detail will not be possible in other surgeries." Yet such "infinite care of detail" has become commonplace in every operating room, regardless of the status of the hospital, because it was necessary for safe surgery. These tests and methods of checking the patient before and during operation are comparatively simple and accurate. They can be used in the home or the hospital, either by the general practitioner or the surgeon. Like other physical signs and the laboratory findings they are subject to certain variation and must be interpreted in conjunction with the other data. Some of these tests we believe worthy of routine use, others of value in the unusual case. They add to our knowledge of each patient, point the finger of warning toward hidden danger and thus prevent needless deaths.

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Southern California is the haven of the migratory pauper. With the many free clinics and charitable institutions the doctor in private practice is two out of ten the goat. However, doctors are not like the "crow" they do find pleasure in work.

## Syphilis of the Stomach

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Paper read before the Kansas State Medical Society at Hutchinson, Kansas, May 4, 1927.

Syphilis of the stomach is rare, but there is substantial evidence that it is not so rare as was formerly supposed. The increasing frequency of its mention in the literature, together with reports of cases, cannot fail to leave the impression that it must be considered more frequently in our differential diagnosis.

Yet, the great difficulties encountered in proving the diagnosis have given rise, in many cases so diagnosed, to a well merited skepticism. Especially is this true of those quoted in the earlier literature, since all too frequently the diagnosis has been based on the therapeutic test, from which in any condition, conclusions must always be drawn with the greatest care. The extensive use of the Wassermann reaction and *x-ray* has greatly aided in throwing a much needed light upon obscure cases. The former has served to call our attention to the existence of an unsuspected infection, while the *x-ray* has demonstrated the actual location, nature and the degree of the resulting pathologic process.

Syphilis of the stomach may conform to any of the following types, although combinations of one or more are not at all infrequent:

1. Syphilitic gastritis.
2. Gumma.
3. Ulcer.
4. Sclerosis or hyperplasia.

In view of the extremely diverse manifestations of syphilis, syphilitic gastritis undoubtedly occurs; yet in by far the majority of instances its diagnosis rests entirely upon clinical observation, and proof of its specific nature is obviously most difficult.

As is well known, specific therapy may exert a favorable influence upon any kind of pathologic process in a syphilitic, chiefly by improving the general condition, consequently gastric symptoms improved by such therapy cannot necessarily be accepted without question as being of luetic origin. In fact Bassler<sup>1</sup> states that in an appreciable number of such cases which have developed gastric

symptoms, some of which may undoubtedly be due to a true gastritis, prompt improvement follows discontinuance of the administration of large doses of potassium iodide and mercury.

It would, therefore, seem well to confine our attention chiefly to those lesions which can either be appreciated by palpation, visualized by *x-ray*, or demonstrated at operation. These include gummata, ulcers, and cases of hyperplasia or sclerosis, all of which may be accepted as tertiary manifestations.

Warthin<sup>2</sup>, after a detailed histological study of autopsy material from many cases of syphilis, reaches the conclusion that contrary to the general conception, the gumma cannot be accepted as the essential tertiary lesion of the disease. The tertiary lesion is, however, a distinctly inflammatory one but mild and of long duration characterized by foci of lymphocytic and round cell infiltration, localized about the blood vessels and lymphatics and associated with tissue proliferation, followed eventually by fibrosis. Such processes are always widely distributed, but individual cases may show an unexplained predilection for certain localities.

Gummata of the stomach are rare, but may occur in any part. They are most frequently found near the pylorus and vary in size from the microscopic so-called miliary gummata, usually arising in the submucosa to a diameter of 5 c.m. or more. These larger lesions commonly result from the coalescence of numerous smaller ones, and often form a distinctly palpable mass, which may easily be mistaken for a neoplasm. Numerous cases of tumor in the region of the pylorus presenting evidence of syphilis elsewhere, as well as a positive Wassermann reaction, and which have shown a satisfactory response to specific therapy, have been reported in the literature. Many of these have been fairly well established as instances of syphilis, especially of those of Meyer<sup>3</sup>, Morgan<sup>4</sup>, and Eusterman<sup>5</sup>, all of which have been demonstrated by *x-ray* examination.

Gummata may either heal with scar tissue formation as often follows specific therapy or break down forming an ulcer



or even perforation. Most syphilitic ulcers probably bear this relation to gummata, and likewise are frequently multiple. There is still another type of ulcer usually less extensive and less frequently multiple, which is thought to result from the obliterative endarteritis so characteristic of syphilis. Ulcers of this type may resemble peptic ulcer, while those resulting from disintegrating gummata may be conspicuous because of their irregular, sometimes serpiginous outline and wide extent, features which may occasionally be apparent from the *x-ray* examination. Peptic ulcer and syphilis both being common affections, one hesitates to accept too frequently the spirochaete as a common etiologic factor, yet Flexner and Lafleur have both reported unquestionable cases.

If we accept the previously mentioned view of Warthin as to the most frequent lesion seen in tertiary syphilis, we might expect to encounter more cases of diffuse hyperplasia of the gastric wall than of the gummata or ulcer. Experience seems to bear this out.

A fair proportion of the more recently reported cases of diffuse hyperplasia have been studied by *x-ray* and present as the most characteristic feature extensive contractural defects usually of the prepyloric or mid-gastric region. These are not often associated with a palpable mass, a condition which would be very unusual in a carcinoma producing such an extensive defect. Except for this point, the *x-ray* findings are so similar to carcinoma that some authorities believe that a diagnosis of the latter is imperative when such contractural defects may chance to be associated with palpable mass. Niles<sup>6</sup>, however, believes that while this type of syphilitic process presents to the *x-ray* a rather varied picture, it lacks the so-called "moth-eaten" effect seen in extensive carcinoma. While this may in many instances be true it seems improbable that this appearance can be considered as sufficiently constant to be relied upon as a differential point.

The stomach capacity may be greatly diminished from the stiffening and contracture of the wall. Peristalsis is absent

over the involved area, in spite of apparently negligible involvement of the muscle layer, which in fact often suggests hypertrophy. The reason for this is obvious when one has opportunity to examine such a stomach. The wall may vary from normal thickness at the fundus to between 3 and 10 m.m., or even more at the involved area where it is converted into a thick fibrous tube of narrow lumen so rigid that the muscle present, even if not involved, would probably be incapable of producing peristaltic waves.

The greatest thickening is seen in the submucosa which has become a dense layer of white fibrous tissue several times the normal thickness from which strands may be seen to enter the muscle layer. The mucosa may show varying degrees of atrophy.

Microscopic examination confirms the above findings, but in addition there is found the dense round and plasma cell infiltration about the vessels, many of which show a high degree of endarteritis. Scattered foci of infiltration may occur at any point, most often in the submucosa but sometimes in the muscle layer, and about these may be evidence of newly formed connective tissue. Parts of the denser fibrous tissue may show only a few small blood vessels and suggest hyaline degeneration but even here are occasionally encountered the peculiar foci of infiltration characteristic of syphilis.

A consideration of the symptomatology reveals a striking absence of either any uniform clinical picture or dependence upon the type of lesion or its localization. The most frequent symptom seems to be pain, which is more or less completely relieved by vomiting. This was present in 39 of 40 in Eusterman's series. The pain from syphilitic ulcer is said to be characterized by unusual severity, and resistance to the ordinary methods of treatment. It may lack the periodicity of peptic ulcer. Hydrochloric acid is usually absent particularly in those cases showing extreme fibrosis. The gastric contents especially in the presence of pyloric obstruction, may suggest either a benign or malign-

nant process, but the long duration of symptoms associated with fairly good nutrition in a person who has not yet reached the cancer age points to syphilis rather than malignancy. Relative to the diagnosis Carman<sup>7</sup> has said:

“As a purely scientific problem, it is beset with doubt and difficulty; as a practical problem, it may often be solved with reasonable certainty by the exercise of ordinary care. Those cases which should be subjected to extraordinary careful judgment are: (1) those with gastric ulcer and achlorhydria, (2) those of hourglass stomach without an ulcer niche, (3) those with markedly contracted stomach showing roentgenologic evidence of a gastric lesion which is not typical of either ulcer or cancer, and (4) those in which the *x*-ray findings suggest cancer although they lack the pronounced characteristics, and the patient is under cancer age.”

Specific therapy is advisable in all cases where an active syphilitic process exists, but the results obtained in gastric lesions are dependent upon the type. If it be only a gastritis, a properly directed course of treatment might be expected to give relief, but should of course be combined with the usual dietary measures. Gummata show a peculiar susceptibility to potassium iodide and arsenicals not seen in any other lesion, and it is here that the most spectacular results may be expected. But on the other hand those cases presenting a hyperplasia or fibrosis are found to be extremely resistant to such therapeutic efforts. This is to be expected, for one could scarcely hope for the absorption of dense fibrous scar tissue no matter what its origin. In syphilis it is the end result of a long continued mild inflammatory process, and while some improvement may occur even in patients suffering from obstruction, this is quite likely due to treatment of the syphilis as a system infection rather than to any effect upon the local gastric lesion.

When pyloric obstruction has occurred, recourse must be had to operative interference, where pyloric resection or even gastro-enterostomy, followed by intensive specific therapy, often gives bril-

liant results. Contractural defects in the mid portion of the stomach fortunately more rarely produce any great degree of obstruction, for so located they would be much less amenable to operative correction. If operative measures become imperative in such a case, the result might well be expected to depend chiefly upon the ingenuity and skill of the surgeon.

#### CASE 1

Mrs. E. W., age 41, married. Referred for examination because of epigastric pain, nausea, vomiting, and loss of weight.

*Past history:* Negative with reference to any facts related to present condition, except for one miscarriage at 6 months, followed by 4 normal pregnancies.

*Present illness:* Onset 2½ years ago with epigastric discomfort after meals, occasionally accompanied by nausea. Symptoms apparently not influenced by the type of food. No vomiting until 6 months ago, since which time it has become more frequent, until she now vomits at least once daily. Pain has become more severe, usually relieved by vomiting. Vomitus has contained food eaten several days previously; not sour, sometimes almost unchanged, and has never suggested presence of blood. Loss of weight began 4 months ago. Has lost 25 pounds.

*Physical examination:* Revealed little information of diagnostic value. The patient was weak and showed obvious loss of weight. There was diffuse epigastric tenderness extending as low as the umbilicus. No mass could be felt, although the abdominal wall was very thin. There was a moderate secondary anemia.

*x-Ray examination:* There was some gastric residue, although no food had been given since the night before. The stomach was higher than the average normal, apparently due to a shortening. There was an abrupt constriction proximal to the pylorus producing almost complete obstruction. The stomach did not empty in 24 hours. Its general contour proximal to the contracture was irregular, and suggested thickening of the wall. This was further indicated by the fact



that peristaltic waves traversed only the extreme upper portion of the stomach. There was no palpable mass, a point of considerable importance, for it is not unusual to feel masses under the fluoroscope, that on the most careful examination will otherwise be overlooked.

The Wassermann reaction was 4+ in the water bath with all antigens. A probable diagnosis of syphilis of the stomach of the hyperplastic type was made and the case immediately referred for operation.

*Operative findings:* On opening the abdominal cavity, the distal  $\frac{2}{3}$  of the stomach was found to be greatly thickened, increasing towards the pylorus and reaching almost 1 cm. immediately proximal to it, producing almost complete obstruction. The wall was very rigid, especially the distal portion but no definite mass could be found, and only a slight enlargement of the lymph glands. It was obviously necessary to relieve the pyloric obstruction, so an anterior gastrotomy was attempted as the only available procedure: This was done with considerable difficulty owing to the high position of the stomach and its greatly thickened wall. A favorable result therefore seemed very questionable and this was confirmed when evidences of infection developed a few days later. Death ensued very shortly for the patient was very weak.

*Autopsy findings:* Permission was obtained for examination of the abdomen only. A localized peritonitis was found due to failure of the sutures to hold. There was little or no reaction at some points of peritoneal contact, probably due in part to the patient's weakened condition, and in part to the impaired blood supply of the gastric wall. The abdominal cavity showed nothing else of note. Examination of the stomach after removal showed diffuse thickening of the entire circumference extending almost to the cardia. Near the pylorus the wall was nearly 1 cm. thick, very tough and rigid. The thickening resulted from a fibrosis involving chiefly the submucosa from which dense strands could be seen extending into the muscle layer, which was in places separated into groups of

fibres surrounded by this dense fibrous tissue. The mucosa in some areas was very thin and atrophic. The diagnosis obviously rested between syphilis and the so-called leather bottle stomach, better termed diffuse fibrocarcinoma.

Microscopically, what has been said of the quantity and distribution of the fibrous tissue was confirmed. In addition there was some hyaline degeneration, and the blood vessels, few in number, were often sclerotic. Sections were cut from numerous areas, but no evidence of malignancy was found. There were, however, numerous foci showing the characteristic perivascular infiltration and fibrosis which has been described in syphilis. Spirochaetes could not be demonstrated.

#### CASE 2

Mrs. S. T. S., age 39, weight 140 pounds. Was referred for examination because of epigastric distress coming on immediately after meals, accompanied by nausea, and usually relieved by vomiting.

*Past history:* Unimportant.

*Present illness:* Onset 2 years ago with above mentioned symptoms, which have been increasing in severity. The pain has been difficult to relieve and occasionally awakens her at night. No relation to type of food has been noticed. Vomiting is not frequent, about twice weekly, usually sour, no old food, no blood. No appreciable loss of weight.

*Physical examination:* Negative, except for diffuse epigastric tenderness.

*x-Ray examination:* Showed slight narrowing of the distal 5 cm. of the stomach, but with normal mobility and no evidence of obstruction. The contour was slightly irregular, indicated thickening, which was further suggested by interference with peristalsis. No mass could be felt. There was considerable gastric retention, over half the barium meal remaining in the stomach at 6 hours, and the upper small intestine contained a rather large amount at 24 hours.

*Wassermann reaction* was 4+ with all antigens.

No opportunity was offered to confirm the diagnosis, so it must still be open to question, yet taken as a whole the picture presented certainly more strongly

suggests an early syphilitic sclerosis than any other possibility. At least in such a case, specific therapy should be the first resort, never neglecting a repetition of the *x-ray* examination after a few weeks, regardless of the effect of the treatment on the symptoms, in order that a possible early atypical malignancy may not be overlooked. It does not seem improbable that vigorous treatment might check the advance of the process and although the fibrosis could not be entirely removed, yet, since no obstruction is present, the patient continue indefinitely without appreciable discomfort.

1. Bassler Diseases of the Stomach and Upper Alimentary Tract.
2. Warthin, A. S. The New Pathology of Syphilis. *Am. Jour. of Syphilis.* 1918 II—425-452.
3. Meyers J. Syphilis of the Stomach. *Albany Med. Ann.* 1912 XXXIII 563-589.
4. Morgan W. G. Syphilis of the Stomach. *Am. Jour. Med. Sci.* 1915 CXLIX 392-406.
5. Eusterman G. B. Syphilis of the Stomach. *Am. Jour. of Syphilis.* 1918 II—205-219.
6. Niles—George M. Some differential Points Between Cancer and Syphilis of the Stomach. *Am. Jour. of Syphilis* 1918 II—222-224.
7. Carman R. D. The Roentgen Diagnosis of Diseases of the Alimentary Canal.

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### Shall the State Dues Be Raised?

J. T. SCOTT, M.D., St. John, Kan.

Read before the Stafford County Medical Society March 14, 1928.

You may have read the Editorial, "Financing Progress," in the February issue of the State Journal and from which the following is quoted:

"It will be for the delegates at the next annual meeting to decide whether these activities shall continue. If by that time they have been convinced of the value and importance of this work, then it will be necessary to determine the amount of dues required to meet the expenses."

It is a condition that confronts us and not a theory. There are two alternatives and a choice must be made. Either there must be an increase of revenue or a curtailment of activities. This is a matter of vital importance and deserves thoughtful consideration by every member of the State Society. It should be thoroughly considered by each of the county societies and their delegates instructed to support such action as they consider to the best interests of both the local and state organizations.

The writer was present at the delegate meeting last year when the resolution to amend the constitution was introduced and has had it in mind continuously. There were some present who opposed raising the dues mainly for the reason that they had been sufficient in the past and for the additional reason that an increase in dues would result in a considerable decrease in membership. These are not reasons but evasions. More than that the first is not true and the second is a presumption.

The dues in the past have not been sufficient and in order to make up the deficiency a considerable reserve fund has been used. If the membership was increasing that would prove a source of additional revenue but such is not the case nor is it likely to ever be so, hence the only source of increase appears to be that of raising the dues.

The state dues in Kansas are as low, if not the lowest, of any state, and yet the work now being accomplished compares favorably with other states. This work can not be continued without adequate support. If the dues were raised from five to eight dollars, as suggested, where is there a more remunerative investment for the doctor? The State Journal is alone worth that price, not to mention defense guarantees, medical propaganda and rational legislation. Can we dispense with the Medical Defense Board, The State Journal, the Board of Public Relations, the Lecture Bureau? Surely no physician who believes in organized medicine would favor such action or question the necessity of providing adequate support.

The State Society was organized sixty-nine years ago. I have been a member since 1910, at which time the dues were three dollars. They were later raised to five dollars, where they have since remained. It requires no stretch of imagination to realize to what extent the activities of the State Society have been enlarged during that time.

Membership is much more valuable than in former days. It certainly follows that enlarged and increased activities call for increased revenue. There is not an investment available to the phy-



sician that equals that of medical society membership, even when considered simply as an investment, and not including the immensely more valuable contribution of culture.

It should be remembered that all good things are expensive, and cost in proportion to their worth. What sufficed for operative expenses ten years ago is wholly inadequate today and what suffices for today will be inadequate for the next decade.

Organized medicine is a going concern and is constantly expanding and progressing. So long as this continues it will mean increasing expense and when it ceases to expand and grow membership will not be worth the purchase at any price. Of the two alternatives I choose raising the dues.

— R —

### Report of Inspections of Schools of Chiropractic and Naturopathy in the United States\*

Personal inspections have recently been made of all schools existing in the United States for the teaching of particular methods of treating human disease. While a complete report of all information secured would hardly be justified, a brief resume of conditions found in schools of chiropractic and naturopathy will be of interest to both physicians and laymen.

#### SCHOOLS OF CHIROPRACTIC

Chiropractic is said to have originated in 1895 with D. D. Palmer, a magnetic healer of Davenport, Iowa, and to have been "developed" by his son B. J. It is in reality the older osteopathic concept very slightly modified and renamed. It was the enlarging of the osteopathic field and the lengthening of the osteopathic curriculum that gave chiropractic its opportunity, and the latter's rapid development has been due largely to the fact that it offered a shortcut to osteopathy.

According to this theory disease is due to vertebral subluxations which cause a pinching of spinal nerves between bones. This pinching interferes with the flow of "Innate Intelligence" or vital energy to the body tissues. The spinal "adjustment" alone renews that flow and restores health.

Chiropractic has had, during its brief career of thirty-two years, about one hundred and fifty schools. Forty of these are still active, many of them offering courses at night only and having a mere handful of students; more than half of the forty are so poorly housed and so inadequately financed that their future is problematic. B. J. Palmer, the "developer" of the cult, recently said: "According to our records, forty-eight chiropractic schools have closed their doors during the past two years."<sup>1</sup>

An entrance requirement of four years of high school study or its equivalent is claimed by the best of these forty schools; it is probable, however, that not one of them is enforcing the requirement. Mature age, business experience, ability to carry the chiropractic courses, or any convenient achievement is declared to be a satisfactory equivalent. A few schools give ridiculously short and easy high school quiz courses and certificates, for which a special tuition fee is charged; this course in one of the best chiropractic schools<sup>2</sup> occupies two evenings weekly for six months. But fifty per cent or more of these schools do not even claim to require a high school education.

The courses offered in the majority of these schools run through "three school-years of six months each." They are poorly chosen, poorly arranged, and very poorly outlined. The student may begin on any school day of the year and finish on the same day of the eighteenth month thereafter. There are no adequate records of amount or quality of work done. Going to school is a matter of "doing time," and the student is given his doctor's degree as soon as the time limit expires. Legislation has forced a few schools to lengthen their courses to twenty-four or twenty-seven months. When this is done, the school usually shortens its working day to three or four hours as compensation, and holds out to the student his ability to spend the re-

\*Inspections were made during the summer and fall of 1927, by representatives of the Council on Medical Education and Hospitals of the American Medical Association. The schools included in these inspections are the schools of chiropody, chiropractic, naturopathy, optometry, osteopathy, and physical therapy, as well as a large number of miscellaneous institutions.

1. Article: "The Great Undertow."

2. National College of Chiropractic, Chicago.

mainder of his time earning his expenses. Also, in almost any twenty-four or twenty-seven month school, a student may graduate at the end of eighteen months if he declares his intention to practice in a state requiring only that amount of study. A few schools require less than eighteen months, and one of the most widely known gives only a home-study course that may be finished within three months.

*The equipment* invariably found in these schools consists of a few adjusting tables, students' chairs, and desks. Some have turned to physical therapy or naturopathy and installed a varying amount of electrical apparatus. A very few have x-ray machines, used (except in one instance)<sup>3</sup> in "spinography." About eight of the forty schools have small chemistry laboratories, with equipment for the very simplest experiments only. Two or three have dissection laboratories. None of the forty schools have laboratories for physics, physiology, physiological chemistry, bacteriology, histology, embryology, or pathology. Courses in these important laboratory subjects are either given by the didactic method or omitted altogether.

*The Clinics* are not adequate for training in the recognition of even the most common disease. There is no adequate apparatus for the diagnosis of such disease. The treatment procedures taught and practiced do not include the therapeutic measures of demonstrated value, and so the patient is left practically without either diagnosis or treatment. There are no hospitals to which patients in need of hospitalization are referred, and none in which students may study the progress of cases.

*The faculties* of these forty schools are made up of men of very poor educational qualifications. While a very few are both educated and shrewd, and an occasional doctor of osteopathy or even of medicine may be found among them, the great majority are not trained in any of the "medical sciences," the non-medical sciences, or the liberal arts. They are frankly out of sympathy with the organized medical and public health interests, and are openly antagonistic to

many of the most universally recognized facts and procedures of civilized life.<sup>4</sup> They circulate by word of mouth and through the school literature, greatly misleading statements about the chiropractic "profession," ambiguous testimonials concerning the cure of incurables, and wild claims about the schools themselves which a most superficial investigation proves to be without foundation in fact.<sup>5</sup>

#### SCHOOLS OF NATUROPATHY

While a venerable old age is claimed for naturopathy, its development has really been more recent than that of chiropractic; its chief exponent, Benedict Lust of New York, claims that he organized the "parent school" in 1896, but even so ancient an origin as that is improbable.

The cult seems to have no basic idea but to be rather a nature-cure hodge-podge with a decided antipathy to drugs. In fact, naturopathy has developed in part as an effort to broaden the scope of chiropractic. There are about five schools of naturopathy and all of them teach chiropractic. Several of the chiropractic schools teach naturopathy. Probably fifty or even seventy-five per cent of the practicing naturopaths have been recruited from the ranks of chiropractic, and the two cults have always been on the friendliest terms.<sup>6</sup>

*Entrance requirements* are said to include four years of high school study or its equivalent, but none of the schools of naturopathy really enforce this rule. Records are not kept; the student's word is taken in the matter, and if he is so thoughtless as to confess that he lacks the high school requirement the matter

3. The Pasadena College of Chiropractic reports that its students are taught x-ray therapeutics.

4. For example: vaccination, typhoid immunization, specific medication, diphtheria antitoxin, quarantine, focal infection, germ theory of disease, etc., etc.

5. Thirteen of these schools have made affidavits to the American College of Chiropractors that the curriculum includes 3528 forty-five-minute hours of work, and on the basis of these affidavits have been rated by this "college" as "class A schools" and awarded "diplomas of honor." Allowing for ten-minute intervals between classes and five school days per week, (considering that not a single holiday is allowed during the eighteen months of the course) this schedule would require more than eight hours of actual attendance daily, a program which no school of any nature would attempt to follow. The American College of Chiropractors admits that none of these schools were inspected prior to their being rated and that none of their claims have been investigated since.

6. The chiropractor may easily become a naturopath by taking a three-month "post-graduate" course in one of the naturopathic schools.



is either forgotten or patched up with as little embarrassment as possible. One school offers a night course in which the deficiency may be made up (extra tuition being charged for this service), but admits that the requirement has never been enforced.

The courses run through twenty-four or thirty-six months, with a short school day and an evident carelessness regarding attendance. It is probable that only one school has day-classes. These institutions show a marked tendency to have students attending two or more "schools" simultaneously. One school, for example, which claims to operate under about twenty different names, offers "a liberal reduction to students taking four or more courses (schools) at the same time." Another tried to enroll the inspector in two "schools" at once when fifty per cent of the sessions of one conflicted with the sessions of the other. One school counts attendance in each class twice—once for naturopathy and once for chiropractic—and so claims to pile up 6000 class-hours (thirty-minute periods) of study, thus "qualifying" under the new Florida law; this school gives every student two diplomas, and many students three or more, each diploma bearing a different name for the school. No outline of the courses offered is published by any of the schools of naturopathy.

The subjects include sysmotherapy, glucokinesis, zone therapy, physicultopathy, astrological diagnosis, practical sphincterology, phrenological physiology, spectrochrome therapy, iridiagnosis, chiropractic, diet hydrotherapy, osteopathy, physiotherapy, electrotherapy, mechanotherapy, heliotherapy, tension-therapy, napropathy, neuropathy, physical culture, and many others.

The equipment in these schools differs little (if at all) from that found in schools of chiropractic, except that a small amount of electrical apparatus is usually found, and adjusting tables are not quite so much in evidence. A small chemistry laboratory is usual; that of the "parent school" in New York has room for two or possibly three students, but has not sufficient equipment for so

large a number to perform the same experiments at the same time. There are no laboratories for physics, physiology, physiological chemistry, anatomy, bacteriology, histology, embryology, or pathology.

The clinics are even less adequate than those of the chiropractic schools. No school of naturopathy has a hospital associated. The therapeutic procedures include chiropractic, osteopathy, hydrotherapy, electrotherapy, diet, and a wide range of so-called "natural methods."

The faculties of these schools are composed of untrained men, many of whom have been recruited from the schools of chiropractic. Their educational qualifications are so like those of teachers of chiropractic that no further statement is necessary. That such instructors should train students in the proper use of so wide a variety of therapeutic measures, and do it within the short time allotted, is obviously impossible.

#### GENERAL DISCUSSION

In such a brief report many matters of interest must be entirely omitted and many others no more than mentioned; elaboration, though a constant temptation, is one which brevity forbids. But to one who is familiar with the elaborate equipment and curriculum found necessary to proper training in the science and art of healing today, the most impressive thing about these naturopathic and chiropractic schools is not what they are, but what they are not. A few statements from this point of view will properly close the report itself and also form an appropriate prelude to the list of schools following.

1. Of the fifty active schools listed, a few are mere "branches" rather than separately existing institutions, and these fifty constitute less than one-third of the number formerly existing.

2. All but a mere handful of these fifty existing schools are so poorly housed and so inadequately financed that their continuation is problematic.

3. Very few of these schools have even one adequately trained teacher on the faculty, and there are probably less than five expert all-time teachers in the entire lot of fifty institutions.

4. Not one of these schools actually enforces a matriculation requirement of even five minutes of high school study.

5. Not one of the fifty schools gives so much as one worthy laboratory course or has one worthily equipped laboratory.

6. Not one of these schools conducts a clinic in which a wide variety of the common diseases may be studied.

7. There is not one clinic equipped with the trained personnel or the scientific apparatus for the clinical diagnosis of a variety of the common diseases, nor having a laboratory equipped for checking such clinical diagnosis.

8. There is not one clinic equipped for the proper treatment of patients suffering from such diseases.

9. There is not one of these schools whose students or whose faculty may enjoy the privilege of practice or even of observation in any worthy hospital.

10. There is not one of these schools that does not proceed on the basis of unproved theory, ignoring the lack of endorsement by all worthy educational institutions.

11. There is not one of these schools that does not ignore or even avowedly oppose the scientific point of view and the facts of medical science accepted by the authorities of the entire civilized world.

12. There is not one of these schools that does not owe its existence to the fact that it offers a short-cut to the practice of medicine.

—R—

## **KANSAS MEDICAL LABORATORY ASSOCIATION**

### **Examination of Material for the Gonococcus**

MARTIN DUPRAY, M.S., Hutchinson, Kan.

#### **CULTURE METHODS**

In recent years a number of authors have published culture methods for the diagnosis of infections caused by the gonococcus. Some of these methods have been recommended for routine use, even to displacing staining methods.

There is no doubt that some of these authors have developed workable methods for cultivating the gonococcus from pus and these methods will readily find a place in certain cases. But the cultural

methods are rather laborious and time consuming, and there are other comparatively nonpathogenic bacteria of fairly common occurrence in the genitals, that are gram negative and which may at times simulate the gonococcus in morphology. The definite identification of organisms so cultivated, as gonococcus or not gonococcus, is not always simple. It has been my experience that there is much room for error in the rapid routine use of such methods. Staining and microscopic examination of the discharges still remains the method of choice for routine use, however much we may appreciate the development of cultural methods to be used in certain selected cases.

#### **STAINING METHODS**

There is a surprising number, mostly practicing physicians, who still use only the methylene blue stain routinely for gonococcus examinations, depending upon the finding of intracellular flattened diplococci for identification.

It is true that in microscopically typical pus the methylene blue stain shows the gonococcus well. But there are certain staphylococci that are common in the genitals, and which are often phagocytized in fair numbers by the pus cells. The immature diplococci of these are often somewhat flattened, thereby increasing their morphologic resemblance to the gonococcus. When the methylene blue stain is depended on a few specimens showing only such staphylococci are almost sure to be falsely called positive for the gonococcus. The Gram's stain readily shows the difference, the staphylococci being Gram positive, the gonococcus Gram negative.

The Gram's stain is shunned by some because of the additional trouble, or because of the deterioration of the old anilin-gentian violet solution, or because of the supposed unreliability of gentian violet dye.

The unreliability of gentian violet dye is no longer a factor. The Stain Committee of the Society of American Bacteriologists has instituted standard methods of testing, and a number of manufacturers are now putting out stains that are



reliable and that are certified by the above Committee.

The development by Hucker of the ammonium oxalate gentian violet staining solution and its adoption into the Manual of Methods of the Society of American Bacteriologists has avoided the deterioration of the prepared stain solution.

With reliable and permanent reagents, the small additional trouble of making a reliable stain should not be considered.

#### CONTROLS

It is the practice of most laboratories to test each lot of Gram's stain solutions against known material to see that the reagents are working properly. Most laboratories go no further. It is my practice to keep a control suspension at hand at all times. This is prepared by taking an agar culture of Staph. aureus and one of Bac. coli, each about 24 hours old. Each culture is washed down with distilled water until a milky suspension of the bacteria is obtained. The two suspensions are mixed in a clean test tube in equal amounts, and to this mixture about one-twentieth its volume of formalin is added. The formalin kills the bacteria and preserves them. If kept in a test tube tightly corked the bacteria show good Gram staining for many months, the Staph. aureus being Gram positive, the Bac. coli being Gram negative. A platinum loop of this suspension (the tube being first shaken) is placed on *each slide to be stained by the Gram's stain*, on a clean place on the slide adjacent to the pus smear. It is then dried, and fixed in the flame when the smear is fixed, and stained coincident with the smear. It serves as a check not only on the reagents, but on the process each time. The control is inspected under the microscope before looking at the pus smear. If the stain has deteriorated, or if the slide being examined has been understained or over-decolorized, the control will show it. If the control is properly stained, the pus smear may be examined with confidence. In disputed cases, or in the rare instances of court testimony, it gives one a comfortable feeling to have a properly

stained control directly on the slide in question.

#### THE GRAM'S STAIN

The Gram's stain method given below, except for using a stronger iodine solution, is one recommended in the Manual of Methods of the Society of American Bacteriologists.

*Ammonium oxalate gentian violet,*  
(Hucker)

- A. Gentian violet, dry dye (or crystal violet if preferred) (Certified, S. A. B. Stain Com) ..... 4 grams.
- 95 per cent grain alcohol (or pure acetone free methyl alcohol works equally well) . . . 20 cc.
- B. Ammonium oxalate crystals . 0.8 gram.
- Distilled water ..... 80.0 cc.

When solution is complete in A and B, mix the two solutions. The resulting stain keeps indefinitely.

#### *Iodine solution*

- Iodine crystals ..... 1 gram.
- Potassium iodide ..... 2 grams.
- Distilled water ..... 100 cc.

Dissolve the iodine and potassium iodide in 5 or 10 cc. of the water, and when solution is complete, add the rest of the water.

This is stronger than the iodine solution usually recommended but I prefer this strength.

#### *Safranin counter stain*

- Safranin, O or Y ..... 0.5 gram.
- Distilled water ..... 100 cc.

Prepare smear of discharge on microscope slide.

Place platinum loop of control suspension on slide adjacent to smear. Dry the control drop. Fix slide in flame.

Stain with ammonium oxalate gentian violet solution, 1 minute hot or 3 minutes cold. Wash with water.

Treat with iodine solution 1 minute. Wash with water.

Decolorize with either 95 per cent grain alcohol or acetone, until no more color comes from smear. If acetone is used the decolorization will be very rapid, usually only a few seconds. Alcohol takes somewhat longer. Wash with water.

Counterstain with safranin solution a few seconds.

Wash off with water, dry, and examine control. If control is properly stained, the *Staph. aureus* Gram positive, the *Bac. coli* Gram negative, examine pus smear.

Some physicians send in discharges moist, pressed between two slides or cover glasses. Such preparations give very poor results. It is much better to prepare thin smears ready to examine, and air dry them before sending to the laboratory.

—————R—————

## **TUBERCULOSIS ABSTRACTS**

### **Early Diagnosis of Tuberculosis**

H. E. KLEINSCHMIDT, M.D., New York  
Supervisor Medical Service, National Tuberculosis Association

"You May Have Tuberculosis—Let Your Doctor Decide" is the slogan of a nation-wide educational campaign now being carried on to arouse the public to the importance of the early diagnosis of tuberculosis. When "consumption" is plainly etched on the face of the sufferer or when his sputum "sinks to the bottom of a pail of water," as the ancients observed, any layman can make the diagnosis of tuberculosis, which is then of little avail. To make a diagnosis of tuberculosis before the process has securely intrenched itself in the lung or before much damage has been done requires skill and is of the utmost importance, for the prognosis of tuberculosis varies in almost direct ratio with the promptness of its discovery. Diagnostic skill, however, is not so much a matter of expertness as it is one of taking pains to collect all the evidence and of evaluating it properly.

### **Symptoms of Tuberculosis**

The most common subjective symptoms observed in the early stage of tuberculosis are the following:

*Fatigue—Loss of Strength*—Lack of endurance, or undue fatigue, often not relieved by usual rest, is the most common symptom of early tuberculosis. Obscure or unexplained fatigability should always suggest tuberculosis.

*Cough and Expectoration*—There is no cough or expectoration characteristic of

tuberculosis but all such persisting for six weeks suggest pulmonary tuberculosis.

*Pain in the Chest—Pleurisy*—Pain aggravated by deep breathing suggests the possibility of tuberculosis.

*Hemoptysis*—Unexplained hemoptysis of a dram or more of blood is presumptive evidence of tuberculosis. Blood streaks, blood spots, etc., may or may not mean tuberculosis.

*Hoarseness and Huskiness*—when persistent, may be due to laryngeal involvement.

*Loss of Weight*—amounting to 5 per cent or more of the usual weight within a period of three or four months and not accounted for by seasonal variation warrants a careful examination for tuberculosis.

*Fever*—Elevation of temperature over 99 degrees F. occurring at some time of the day for several days should be regarded as abnormal temperature and warrants the suspicion of tuberculosis. It should be borne in mind that temperature as high as 99.6 degrees F. may occur after exercise, after meals or during the menstrual period.

*Rapid Pulse*—A pulse rate in men exceeding 90 per minute and in women 95 per minute may be one of the early symptoms of tuberculosis.

*Indigestion*—Loss of appetite, "finicky" appetite, or what the patient terms "dyspepsia" or "indigestion" is a common early symptom of tuberculosis.

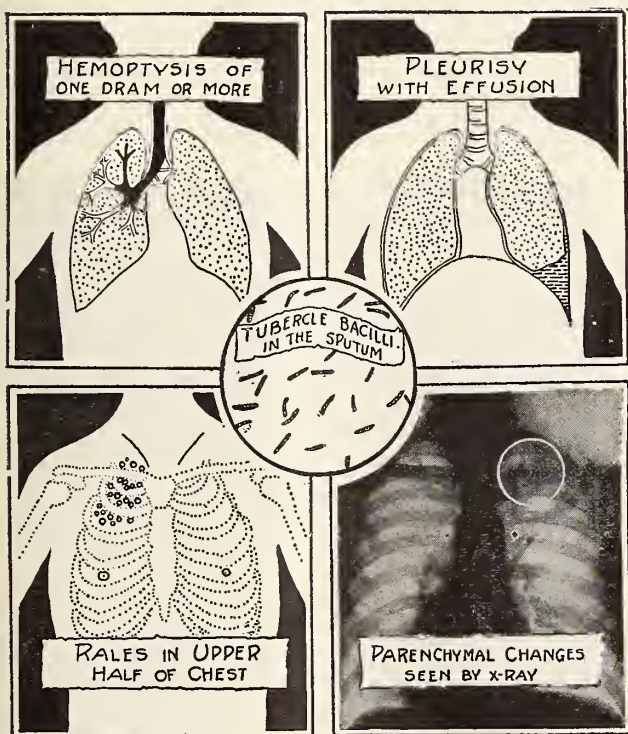
*Nervous Irritability*—is a frequent early symptom.

Any one or several of these symptoms may prompt the patient to seek medical advice. None of them are pathognomonic. A careful history, of course, should be made, followed by a thorough physical examination, microscopic examination of the sputum and, in most cases, an x-ray examination. The possibility of focal infection of the upper respiratory tract, the sinuses and elsewhere should be excluded. Exposure to tuberculosis, especially if it has been intimate and prolonged or frequently repeated, is very suggestive as adding to the probability of the diagnosis.



### Diagnostic Criteria

The diagnosis of tuberculosis cannot be reduced to a formula. After all possible evidence has been collected, it must be evaluated, which requires judgment based on experience and on a visualization of the pathology. Guesswork can be materially reduced, however, by examining the collected evidence in the light of certain "key" symptoms. These are the so-called five criteria of diagnosis of pulmonary tuberculosis and are as follows:



1. A history of hemoptysis of one dram or more without any other known cause.

2. A history of an otherwise unexplained pleurisy with effusion.

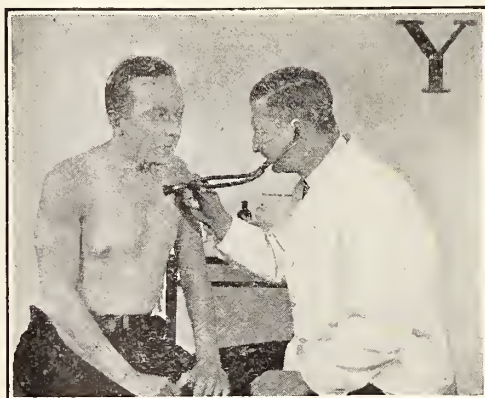
3. Definite rales which persist for a week or more in the upper half of the chest.

4. Definite evidence of parenchymal changes seen in the *x-ray* film, located usually in the upper half of the chest.

5. The demonstration of tubercle bacilli in the sputum on two or more occasions.

The first and second constitute merely *presumptive evidence*; the third and fourth, while at times misleading and possibly due to other causes, nevertheless very *strongly indicate* pulmonary

tuberculosis. The fifth is practically always *conclusive evidence* of pulmonary tuberculosis, although it must be borne in mind that in rare cases, tuberculosis



of the tracheobronchial lymph nodes without involvement of the lung parenchyma gives rise to a positive sputum.

### Activity

The determination of activity requires the correlation of clinical, laboratory and *x-ray* data during a period of observation, preferably in a sanatorium.

Progressive infection may exist without the presence of any symptoms. As a rule, however, the necessity for treatment is determined from the symptoms, such as fever, night-sweats, rapid pulse, fatigue, etc. Activity cannot be determined by physical signs alone. Repeated physical examinations and serial *x-rays* very often show its presence. The occurrence of tubercle bacilli in the sputum does not in itself mean activity of the disease, though it does indicate a less favorable type of lesion (danger of bronchogenic spread). The same may be said of slight hemoptysis. The presence of rales does not mean activity.

### R

"To be honest, to be kind, to earn a little and to spend a little less; to make upon the whole a family happier for his presence; to renounce all when that shall be necessary and not be embittered; to keep a few friends, but these without capitulation; above all, on the same grim condition, to keep friends with himself—here is a task for all that a man has of fortitude and delicacy."

—Robert Louis Stevenson.

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"And what is a contingent fee," asked the client.

"Well," said the lawyer, "if I lose your case, I get nothing, if I win the case you get nothing."



## UNIVERSITY OF KANSAS CLINICS

### Horseshoe Kidney—A Case Report

NELSE F. OCKERBLAD, M.D., F.A.C.S.

Professor of Urology, University of Kansas School of Medicine

This curious developmental defect commonly known as horseshoe kidney is so well known that probably a higher percentage of this anomaly of the kidney has been made a matter of record than any other, largely because of its interesting name and fascinating form. It results from a fusion of the upper or lower poles of the kidney across the midline. In large series of autopsies this anomaly is found to be the commonest congenital renal defect occurring in from 1-600 to

stringy mass. This isthmus may be in front of the abdominal vessels, which is the most common position, or rarely behind both vessels or even between the two large vessels. The blood supply to such a kidney is wholly irregular, the vessels having no fixed order of penetrating the kidney. The position of this malformed organ may extend from above the normal kidney position to a point in the pelvis.

#### CASE REPORT

P. W., a white male 43 years of age, was sent in to the Bell Memorial Hospital by Dr. V. McMullen of Burlington, Kansas. This patient was first admitted to the hospital on January 28, 1925, and

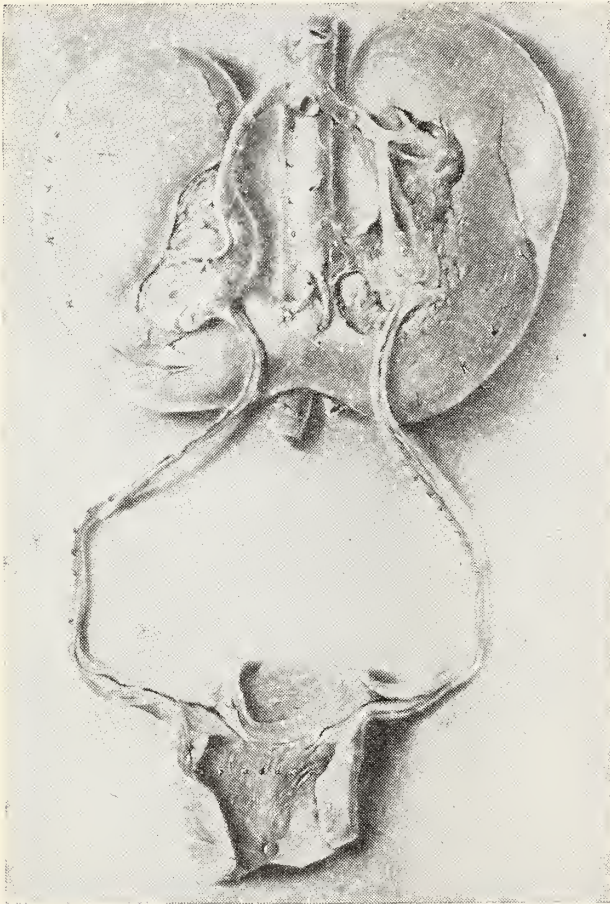


Fig. I—This drawing made from the pathological specimen obtained at autopsy. This is a form of horseshoe kidney in which the lower poles are fused, the commissure or isthmus passing in front of the great vessels. The pelves and ureters are at the front of the kidney, the ureter passing over the isthmus. Anomalous blood vessels are the rule in this congenital defect.

1-1,000 cases. The isthmus or connecting portion may be made up of renal tissue or it may be merely a fibrous cord or



Fig. II—Plate showing opaque catheters in ureters on either side. A large stone is shown in the left kidney pelvis and a small one in the right. In the original roentgenograms the commissure can be faintly traced.

remained in the hospital for a month. On this occasion his complaint was increased frequency of and burning on urination, together with a profuse urethral discharge. The onset of this discharge was about December 1, 1924, and the admission diagnosis was a gonococcus infection which it proved to be. He



improved under treatment and was sent home February 28, 1925. He was returned to the hospital on August 15, 1925, with a complaint of pain in his bladder and burning and frequent urination. He had no discharge at this time; nocturia eight to ten times; urine loaded with pus. On this second admission his hemoglobin was 54 per cent; red blood cells 3,000,000; leukocytes 8,500. P. S. P. test showed ten per cent first per second hour; urea nitrogen per 100 c.c., 11.20; creatinine 1.5. Cystoscopic examination showed a bladder the seat of a marked cystitis; ureters two in number and normally placed; both catheterized to the kidney; strictures found in both ureters; *x-ray* plates taken which show a small stone in the left kidney pelvis and a large stone in the right kidney pelvis. Bilateral pyeloureterograms were made

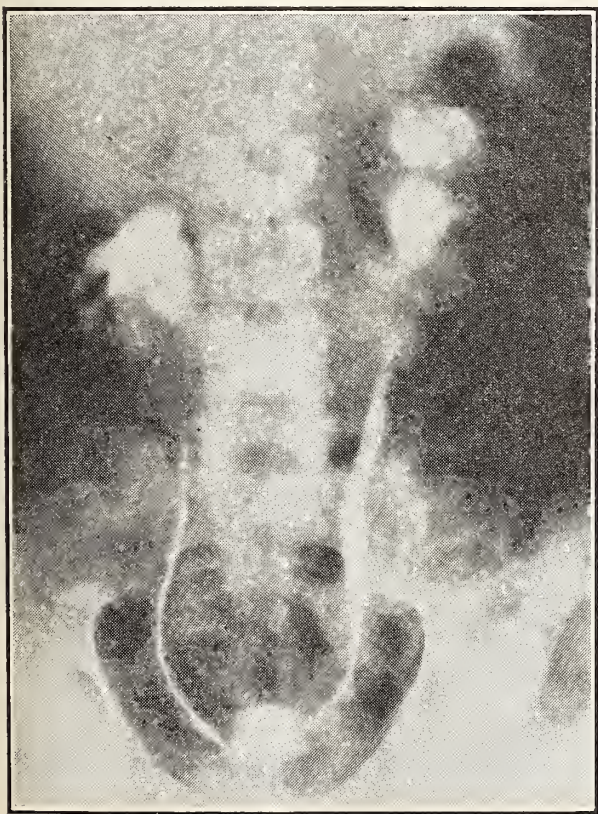


Fig. III—The plate shows double pyeloureterograms which show the kidney pelvises close together and set in a rather V position with their lower ends closer together than normal. This should have enabled us to have made the diagnosis before operation.

and revealed great damage to both kidneys. An exploratory operation was done on the right kidney but we encoun-

tered a horseshoe kidney that was badly infected and closed the wound with drainage. The patient died of a septicemia on September 26; autopsy was done by H. R. Wahl. Anatomical diagnosis: horseshoe kidney, nephrolithiasis, hemorrhagic cystitis, chronic urethritis, acute and chronic pyelitis, acute nephritis, hydronephrosis, infarcts of the kidney, multiple abscesses of the lung, with empyema of the left lung, fibrino purulent pleurisy, broncho-pneumonia, anomalous blood supply to the kidney, sacral abscess and abscess of the right elbow, prostatic hypertrophy, early atherosclerosis, and cystic choroiditis.

#### DISCUSSION

It is apparent from the history and findings in this case that prior to his gonococcus infection in December, 1924, this patient was in good health and able to work as a laborer. The prolonged infection so weakened him that the secondary infection which remained after the clearing up of the gonococcus infection produced systemic changes that caused his death in September of 1925. The horseshoe kidney in itself had nothing to do with his death. He could have lived his normal span of life had not other factors intervened. The stones probably formed in his kidney during the period of his illness. Unfortunately, we did not diagnose this case before operation. A review of the *x-ray* plates and pyeloureterograms leads us to believe we could have easily diagnosed horseshoe kidney in this case if we had thought of it as a possibility. Judd, Braasch and Scholl state that out of sixteen cases of horseshoe kidney operated upon by them only two were diagnosed before operation. Kretschmer, writing on the preoperative diagnosis of horseshoe kidney, reports three cases of his own in which the diagnosis was made. He reports these cases in each of three classes of cases:

1. Cases in which the diagnosis was made from a plain *x-ray* plate, the outline of the fused kidney being visible on the film.

2. Cases in which the diagnosis is made from the roentgenograms and in which there is associated disease, the



arrangement of the shadows being the key.

3. Cases in which the diagnosis is made from the pyelographic shadows. In such cases Kretschmer calls attention to the convexity of the pyelon and also observes that the lower calices point toward the midline.

Eisendrath, Phifer and Culver report three cases of their own and collect 133 cases of horseshoe kidney from the literature up to July, 1925 and find that only nineteen of these, or 14.2 per cent, were diagnosed before operation or necroscopy and, of these, ten were diagnosed in the days before the *x*-ray. With the modern *x*-ray technique, soft parts are portrayed upon the film with wonderful clearness and, as Kretschmer and Eisendrath have pointed out, we should be able to consistently make the diagnosis before operation or autopsy.

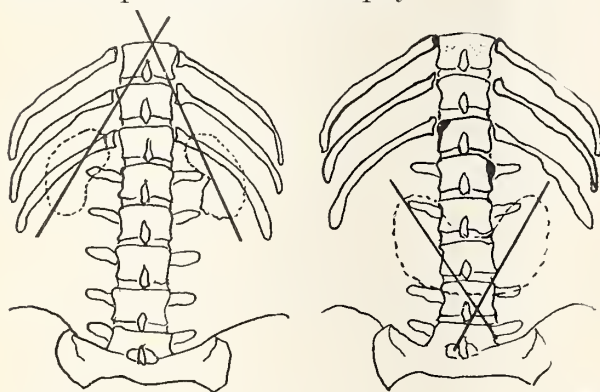


Fig. IV—These diagrams show the axes of the normal kidneys and that of the horseshoe kidney. The lines representing the axes of the kidneys in the horseshoe kidney, if projected, meet below the kidney; in the normal kidney these lines meet above. (Ils. from the *Lehrbuch der Röntgendiagnostik*, Sching, Baeusch and Friedl. pp. 1084).

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—R—

#### Special Announcement

The thirteenth annual convention of the Catholic Hospital Association of the United States and Canada and the second annual Hospital Clinical Congress of North America will be held in the Cincinnati Music Hall, Cincinnati, Ohio,

June 18 to 22, inclusive, 1928. The fourth annual convention of the International Guild of Nurses will be held at the same time, in the same building, at night meetings.

This convention and congress will be one of the largest and most important hospital meetings of the year, and will comprise general scientific meetings, special clinics or demonstrations of hospital departments, and three hundred special commercial and educational exhibits. Outstanding authorities in medicine, surgery, pathology, nursing, dietetics and hospital administration, architecture and engineering will lecture and demonstrate in specially planned clinics representing the various departments of the modern hospital. A professional program of the highest interest and value is now being formulated, and all persons interested in medical and hospital service are cordially invited to attend. Further information may be obtained from John R. Hughes, M.D., Dean of the College of Hospital Administration, Marquette University, Milwaukee, Wisconsin, who is general chairman of the convention and congress.

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#### Council Passed

The notable success of many pharmaceutical products which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in "New and Nonofficial Remedies" recommends not only the plan itself, but the wisdom of the medical profession in selecting these reliable "Council Passed" remedies for daily use.

Among the medicinal chemicals now being widely used are such "Council Passed" products as Ephedrine Hydrochloride, Neocinchophen, Butyn, Metaphen, Butesin Picrate, Anesthesin, Chlorazene, Amidopyrine, Procaine and Neutral Acriflavine, all of which are described in the recent edition of "New and Nonofficial Remedies."

These remedies are the result of research and clinical study. They have been announced in our pages and are worthy of further investigation on the part of our readers.



# THE JOURNAL

of the

## Kansas Medical Society

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W. E. McVEY, M. D. - - Editor

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### WHAT OF THE BASIC SCIENCE ACT

This campaign for better medical legislation is not a one man job, nor a job for a half dozen men, but there is something for everybody to do. If it fails it will be because too many of us have neglected to do our share of the work. The most important thing to be done is to explain to the people and to the candidates for election to the next legislature just what we are asking for. There is no occasion to make a secret of it, for it is a fair and honorable request we shall make. It is fair to every one and if it is explained to the people they will be for it. If every member of the society will explain the requirements of the laws regulating the practice of the healing art that now exist and will explain the purposes of the basic science act to his patrons and his friends and to such candidates as he may know, and tell them that a bill will be introduced at the next legislature for the enactment of the basic science act, he will be surprised to find how willingly and how largely the people will support it. And it is the support of

the people that is needed to secure that kind of legislation.

We want this bill to be passed on its merits. We want our demands to be backed by the voice of the people, and to get that it will only be necessary to tell them about it.

The adoption of our proposed basic science act by the next legislature cannot be regarded as a radical procedure, for the provisions of that act are already largely included in the laws now on our statute books. The medical practice act which became a law in 1901, provides that applicants for a license to practice medicine "shall submit to an examination of a character to test their qualifications as practitioners of medicine and surgery, and which shall embrace all those topics and subjects a knowledge of which is generally required by reputable medical colleges of the United States for a degree of doctor of medicine: *Provided*, that the examination in materia medica and therapeutics and in the theory and practice of medicine shall be conducted by those members of the board who are of the same school of practice as the applicant claims to follow."

When this law was passed there were but three schools of practice in Kansas, regulars, homeopaths and eclectics. So that this law required just what is asked for now, that all those who are given a license to practice the healing art in this State shall pass the same examination in the basic sciences.

A few years later when the law providing for the examination and registration of osteopaths was passed the status of the basic sciences in their relation to the proper qualification of those who desire to practice the healing art, was not changed. For this law requires that "The board shall subject all applicants to a practical examination as to their qualification for the practice of

osteopathy, in writing, in the subjects of anatomy, physiology, physiological chemistry and toxicology, pathology, diagnosis, hygiene, obstetrics and gynecology, surgery, principles and practice of osteopathy and such other subjects as the board may require."

Applicants for license to practice osteopathy in this state are now required by law to pass examinations in all of the basic sciences except bacteriology.

The law providing for the examination and registration of chiropractors requires that "all examinations shall be made in writing, the subjects of which shall be as follows: Anatomy, physiology, hygiene, symptomatology, nerve tracing, chiropractic, orthopedia, principles of chiropractic and adjusting as taught by chiropractic schools and colleges: *Provided*, that applicants for license under this act shall be required to pass the same examination in physiology, anatomy, hygiene and symptomatology required of licensed practitioners of medicine and surgery in this State."

So that chiropractors are required by the laws of this state to pass examinations in four of the seven basic sciences; and not only to pass examinations in these subjects but to pass the same examinations as those required of practitioners of medicine and surgery.

The subjects designated as basic sciences in the proposed bill are anatomy, physiology, chemistry, bacteriology, pathology, diagnosis (symptomatology) and hygiene. It will be noted that none of these subjects has any reference to methods of practice.

An analysis of the laws now on the statute books shows that regulars, homeopaths and electics are required to pass examinations in all of these subjects for "a knowledge of all of them is generally required by reputable medi-

cal colleges of the United States for the degree of doctor of medicine": it shows that osteopaths are required to pass examinations in all of them but bacteriology and this, no doubt, is now included among the "such other subjects as the board may require"; and it also shows that chiropractors are required by law to pass the same examination in four of these subjects as "required of licensed practitioners of medicine and surgery."

It is generally known that chiropractic is an offshoot of osteopathy and founded on some of the theories of disease that formed the basis of osteopathy. Naturally one wonders if in breaking away from osteopathy the disciples of chiropractic also broke away from the necessity for knowing something about the vital processes going on in the body and the tissue changes caused by disease.

Prior to the passage of the law providing for the examination and registration of chiropractors the State had practically a single standard of qualifications for all those who were licensed to practice the healing art, at least it required of all of them an examination in all but one of the basic sciences. Why an exception was made for chiropractors has not yet been explained. It was evidently intended by the law makers to maintain the standard already adopted when they introduced the proviso that chiropractors should pass the same examination in anatomy, physiology, symptomatology and hygiene required of practitioners of medicine and surgery and were no doubt misled in underestimating the importance of chemistry, pathology and bacteriology. It would be possible to restore the uniform standard of qualifications by making some slight amendments to the laws now on the statute books, but there are several reasons why such a standard should be established by an entirely new law and



this administered by an entirely disinterested board of examiners.

An individual citizen has the right to have his own ailments treated by any method he chooses, but the State has the right to say what shall be the qualifications of those it permits to treat its ailing citizens, and the State puts the seal of approval on those to whom it issues a license.

When a license is issued to a practitioner of medicine and surgery the State says to its citizens that he is competent to treat all their ills by any methods he chooses. When a license is issued to an osteopath it does not say to its citizens that he is competent to treat all their diseases except those caused by bacteria, but it says he is competent to treat all their diseases by the methods of osteopathy. When a license is issued to a chiropractor, it does not say he is competent to treat such of their diseases as are not caused by bacteria, those in which no tissue changes have occurred, and those in which no alterations of the vital functions exist, but it says he is competent to treat all their diseases by chiropractic methods.

Tuberculosis is the same disease whether treated by scientific, osteopathic or chiropractic methods, so are all diseases that afflict mankind, and the State when it puts its approval on any kind of a practitioner should be assured that he knows something about the nature of diseases, their causes and their effects upon the various structures of the body.

It is the duty of the State to protect its citizens against incompetent practitioners. It is a privilege granted by the State to each of the various so-called schools of practice to determine who shall, and who shall not be permitted to practice the methods of healing espoused by it. But up to this time these various schools of practice, through the boards

appointed from among their own members have exercised the privilege granted them and have assumed the duty the State owes its citizens.

This is against public policy, even if there were no conflict of interests among the various boards of examiners. If the State purposes to use its police power and determine the qualifications of those who are permitted to practice the healing art, it must first establish a single standard of qualification and must appoint a board of examiners who will not be influenced by the interests of either of the various schools of practice, a board composed of men who are not engaged in the practice of the healing art.

It is with this purpose in view that an effort will be made to secure the passage of the basic science act by the next legislature.

It is frequently asked why osteopaths are permitted to practice medicine. The answer to this question will be found in the amendment to the medical practice act which was adopted when the bill creating a board of chiropractor examiners was passed. The clause which was then introduced reads as follows: "This act shall not apply to any registered osteopathic physician, or any chiropractic practitioners of the state of Kansas," etc.

The law providing for the examination and registration of osteopaths does not define osteopathy and the only limitation imposed upon them seems to be contained in the following clause: "If such examination is passed in a manner satisfactory to the board, then the board shall issue to said applicant a certificate granting him the right to practice osteopathy in the state of Kansas, as taught and practiced in the legally incorporated colleges of osteopathy of goodrepute." Section 1202 defines an

osteopathic school or college of good repute as follows: "The words 'osteopathic school or college of good repute', wherever used in this act, shall be deemed and taken to include only such schools or colleges of osteopathy as are legally incorporated, and which prescribe a course of study covering the time provided for under the provisions of this act, and which shall instruct in all the branches of study in which examinations are required for license under the provisions of this act", etc.

There is no doubt but the license granted to an osteopath permits him to practice obstetrics and surgery. It would seem also that if the colleges of osteopathy now, or any time hereafter, include a course in drug therapy in their curriculum, even those already licensed may administer drugs. But even if their license does not specifically permit them to administer drugs, there is no law to prevent them, for it is definitely provided that the medical practice act shall not apply to them.

The case of the chiropractor, however, is very different. The law providing for the examination and registration of chiropractors is very explicit. It says: "Any chiropractor who has complied with the provisions of this act may adjust by hand any displaced tissue of any kind or nature, but shall not prescribe for or administer to any person any medicine or drugs now or hereafter included in materia medica, perform minor surgery, only as hereinbefore stated, nor practice obstetrics."

Under section 1310 is the following:  
 "or any person who shall violate any of the provisions of this act shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than fifty (\$50.00) dollars nor more than two hundred (\$200.00) dollars or by imprisonment in

the county jail for not less than thirty (30) days nor more than one year or both at the discretion of the court."

If there are any chiropractors who are prescribing or administering drugs, doing surgical operations or practicing obstetrics, it would be quite the proper thing for the county medical society to get the evidence and make a proper complaint to the county attorney.

#### ARE THE PRESENT LAWS CONSTITUTIONAL

It is not impossible that according to some interpretations of the fourteenth amendment the laws regulating the practice of medicine in Kansas may be unconstitutional.

Section 1 of the fourteenth amendment reads: "All persons born or naturalized in the United States and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any state deprive any person of his life, liberty or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of its laws."

To the majority of us that means just about what it says and we probably would not find in it anything particularly applicable to the practice of the healing art. But well trained legal minds seem to find meanings and possibilities of meanings in apparently ordinary phrases that you and I never would have suspected. It seems that the supreme court has decided a good many cases in which the protection of the fourteenth amendment was invoked and a good many principles have been established for its proper interpretation. Taking from the hundreds of these decisions just a few of the principles established we find "Amendment secures to all under like



circumstances equal protection"; "Equal protection secured if laws operate on all alike"; "Inequality sustained only when law treats parties differently from others".

Regulars, homeopaths, eclectics, osteopaths and chiropractors are all practicing the healing art in this state. All are licensed to treat the sick but under different laws. One law for the regulars, homeopaths and eclectics; another law for the osteopaths and still another for the chiropractors; these laws creating a different standard of qualifications for each group.

Just what the basis for classification is seems uncertain but presumably it is the methods used for treating the sick. Presumably each of these groups use different methods, and each member of a group uses the particular method associated with its name. It seems to be an arbitrary classification based upon claims that have only partial foundation in fact. Methods of treatment are used even by the chiropractors that are in common use by the other groups—such as physiotherapy. If some difference in methods of practice is justification for different standards of qualification then there should be practically as many different standards as there are practitioners.

Our contention is that all of these groups are practicing the healing art, the members of all of these groups are licensed to treat all of the diseases of the human body; therefore there should be but one standard of qualifications. They are "all under like circumstances".

Were they limited to the treatment of certain diseases of certain parts of the body, as are dentists, there is some justification for a difference in the standards of qualifications required. Since there is only slight difference in the requirements prescribed by the medical practice act

and the osteopathic law the question of constitutionality bears particularly upon the law providing for the examination and registration of chiropractors.

#### FRIENDS AMONG THE EDITORS

It is encouraging to find such editorials as the following in one of the leading daily newspapers of the state. No doubt there are many other editors whose personal opinions are in harmony with those expressed in this article but for some reason are never voiced. The editor of the Gazette has a reputation for independent thinking and fearless expression and it is with considerable satisfaction that we reproduce this editorial which appeared in the Emporia Gazette of February 9.

#### *Medical "Liberty"*

The Goddess of Liberty has many suppliants, and probably the least worthy of them are the quacks who invoke the phrases "medical freedom" and "medical liberty," when the law gets after them.

Myriads of bone-thumpers, who have obtained an engraved certificate from a six months' correspondence course in some obscure diploma mill, squawk that their constitutional rights are invaded when they are hauled into court for malpractice.

As a matter of fact, the laws governing medical practice are unusually sensible and just in all states, and err only in that they are not strict enough, and permit all sorts of queer birds to hack, rub, saw and knead the citizenry with complete immunity from the consequences.

If ever you are a stranger in a new community and have occasion to consult a doctor, read his certificates with care. If he does not have a diploma from a well-known, established and reputable medical school, slide out of his office as fast as you can.

Requirements for practice of medicine are becoming more strict, and should be made even stricter.

An immense amount of information about the human body and its functions

has been discovered, and no young doctor can lay claim to knowing enough of it to warrant his practicing on others unless he has finished college, taken at least two years in a reputable medical school and served as interne in a hospital for perhaps two years more.

If you have anything serious the matter with you, either pick an old-timer with years of experience behind him, or else a young doctor with the above qualifications.

—R—

### CHIPS

“Mohammed started trial marriages.”

Endocrin insanity is becoming fashionable.

“Education is the net result of our reactions to our contact with life.”

Daily health examinations of school pupils, by the teacher, is urged by some of the school superintendents. A questionable innovation.

Preserving fruit by a thermo-electric current is said to be practical. “It destroys all bacteria in six minutes,” is the statement.

A New York scientist reports that he has kept a chicken heart alive for sixteen years. This will stimulate the giblet trade.

“Twinkling of the stars is said to be caused by a mixture of atoms, electrons and ether waves in the wildest state of agitation.” Stampeded as it were.

A new gray-green mat-glazed tile is being used in the operating rooms of some of the hospitals on the Pacific Coast. The claim is made that it relieves all glare and eyestrain of the operator and is restful and soothing to the eyes.

An epidemic of masculinity struck the Pasadena Hospital last month when 24 of the thirty babies born in it were boys.

From Vienna comes the news that a simple substitute has been discovered which does away with monkey glands and their transplantation to renovate the old man and to renew his virility. The new

remedy is—“a solution of 7 per cent of phenol applied to the nervous sympathicus. It kills the sole cause for the ravages of age.” The credulity of man today excels that of the dark ages.

The rejuvenation in bland transplantation is shown to be short lived. The good (?) results, in all probability, are caused by the reaction from the shock of the operation and the psychological tonic—and the last state of the victim is worse than the first.

—R—

### Refractoriness to Insulin

There is a gradually increasing number of records of diabetic patients who seem to be resistant to the expected remedial action of insulin. In a recent case, a patient proved relatively refractory to insulin for some months, responded only to enormous doses, and slipped into coma or precoma as soon as these doses were reduced. Tests showed that the refractory condition was not due to an inhibitory substance—an anti-insulin—in the blood. The observers of this case are inclined to believe that the peculiar reactions shown by their patient can best be explained by assuming that the diabetes was not due exclusively to pancreatic insufficiency but to the lack of some substance other than insulin and equally necessary for the metabolism of carbohydrates. (J. A. M. A., Feb. 18, '28).

—R—

### SOCIETIES

#### SEDGWICK COUNTY SOCIETY

The Sedgwick County Medical Society held their February clinic at the St. Francis Hospital, February 21, with a large number of doctors present. The program of the morning session consisted of operations and that of the afternoon session of medical papers with the showing of pathological specimens. At the evening session these operations and papers were ably discussed by the doctors present.

Dr. Clyde O. Donaldson, of Kansas City, Mo., was the principal speaker of the evening. He gave a most interesting talk on “Treatment of Cancer of the Cervix.” This talk was illustrated by moving picture slides, showing the effect of light-rays, x-rays, radio-rays and



radium in the treatment of cancer. This was one of the most interesting meetings we have had for some time.

At the March meeting, which will be held March 20, Dr. Richard Sutton, of Kansas City, Mo., will be the speaker. His subject will be "Tiger Trails in Asia."

At a recent election the following officers were chosen for the year 1928: Dr. C. A. Parker, President; Dr. C. H. Briggs, Vice President; Dr. W. J. Eilerts, Secretary; Dr. C. D. McKeown, Treasurer.

W. J. EILERTS, Secy.

#### CLAY COUNTY SOCIETY

The regular meeting of the Clay County Medical Society was held at the Clay Center Community Hospital on Friday evening, February 10. The members of the society and the nurses were guests of the hospital at a 6 o'clock dinner. After dinner the society met in the sun room of the hospital. The first part of the program consisted of a baby clinic conducted by Dr. Frank C. Neff of Kansas City, Mo. Several interesting cases were presented and Dr. Neff gave some valuable advice in the diagnosis and treatment of such cases. Dr. Neff then gave a lecture illustrated by lantern slides on "Observations of the Infant During the First Two Weeks of Life." This was instructive and fully appreciated by those present.

The question of annual dues for the Clay County Medical Society was discussed and it was unanimously decided that the dues for 1928 should be \$10. Dr. E. C. Morgan made a motion which was seconded by Dr. E. N. Martin to the effect that this money should be used for the running expenses of the society and that no part of it be used for banquet purposes. An application from Dr. R. P. Stafford of Junction City was received and referred to the board of censors. There was a good attendance of doctors, and besides the nurses of the hospital, Miss Celia Hanson and Miss Lillian Carlson were present.

X. OLSEN, Secy.

#### STAFFORD COUNTY SOCIETY

The regular meeting was held in St. John on the evening of the second Thursday in February. The attendance was small.

Dr. F. W. Tretbar was unable to be present and his paper on "Birth Control" was read by J. J. Tretbar. This was an instructive and interesting paper and elicited general discussion. A motion was carried to recommend it for a place on the program of the State Society at Wichita.

A postgraduate course in pediatrics is now being given at Pratt and a representative was present at this meeting.

The membership is enthusiastic over the results of the public meetings held last summer and will continue the experiment during the coming season. A public meeting will be held in each of the cities in the county.

The 1928 dues have been paid and we are happy to report 100 per cent membership.

The editorial on "Financing Progress" in the current issue of the State Journal deserves thoughtful reading by every member of the society. This editorial will be thoroughly discussed by this society at the March meeting. The condition is obvious, it means curtailment of activities or increase of revenue.

Surely there will be an overwhelming demand for the latter. Let's all THINK.

J. T. SCOTT, Secy.

#### JOHNSON COUNTY SOCIETY

The January meeting of the Johnson County Society was held at Hotel Olathe on January 9. Dr. J. E. Castles of Kansas City, Mo., read a paper on "Traumatic Surgery." He stressed the necessity for cleansing the wound, providing drainage, controlling hemorrhage and described methods for preventing and limiting infection. Nine of fifteen members were present.

The regular February meeting of this society was held at the same place on February 13. The members and guests, according to custom, had dinner together. The speaker of the evening was Dr. Raymond W. Swinney of Kansas City, who talked on the heart and some of its

commoner diseases. The address was fully appreciated. Eleven members were present.

At the regular annual meeting the following officers were elected: A. L. Ludwig, Overland Park, President; C. W. Jones, Olathe, Vice President; D. E. Bronson, Olathe, Secretary; R. L. Moberly, Olathe, Treasurer; F. F. Greene, Olathe, Delegate.

D. E. BRONSON, Secy.

#### SHAWNEE COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Shawnee County Medical Society was held at St. Francis Hospital, Monday evening, February 6. The following program was given:

Dr. Marvin Hall—Adenocarcinoma of the Ovary.

Dr. J. A. Crabb—1. Congenital Double Dislocation of the Hip (Case reports).

2. Pregnancy with Fracture of the Pelvis.

3. Ureteral Kink with Dietls Crisis.

Following the program, the committee appointed at the November meeting to investigate the municipal clinics, made the following report:

*To the Shawnee County Medical Society:*

The undersigned committee, appointed to make a survey of free public health activities in Topeka, in their relation to the practicing physician, submits the following findings and recommendations:

1. We find that the Municipal Free Clinic is under the management of the City Board of Health, which is composed of two Commissioners, Hancock and McGiffert; two practicing physicians, Drs. Loveland and R. J. Miller; and the City Health Officer, Dr. J. H. Kinnaman. The latter is the executive officer and supervisor of the clinic, and the other members of the staff are appointed by the Board of Health. The staff is permanent or non-rotating, and serves without compensation.

2. We find that the clinic handles ambulatory patients in the following departments: Urology, neurology, surgery, eye-ear-nose-throat, prenatal, pediatrics, venereal and medical.

3. We find that a card for each patient is kept on file, showing more or less com-

pletely his social status, income, etc., but that this record does not show whether the representations therein have been verified by investigation.

4. We find that there are no well-defined rules established, governing eligibility of applicants to free treatment.

5. We find that the patients' records do not show the names of their family physician, nor reveal whom they call if medical services are required in the home. Neither do these records show whether patients are the recipients of other than medical charity, except in cases directly referred by organized charities.

6. We find that the clinic does not provide medicines for the patients, to be used in the interim between visits to the clinic, but that such medicine as is prescribed must be bought by the patients.

7. We find that the members of the staff do not extend their gratuitous services to the patients at their homes, except in rare instances, and that any such need is presumably met by the family physician, or by any practitioner available.

8. We find that some members of the staff do not appear at the clinic, but have such patients as present themselves in their departments sent to their offices for treatment.

9. We find that it has been the practice to immunize, without charge, any children from the schools presenting themselves, regardless of ability to pay. That in the immunization propaganda pupils are asked to indicate whether they prefer to have the work done by the physician of their choice for pay, or by the health officer without pay. We find that no one is given the immunization free if he insists on paying his doctor to do it.

10. We find that the public schools also maintain a free clinic for pupils. That such pupils as, in the opinion of the school nurses, need dental treatment, tonsillectomy, refraction, etc., are given the option of having the work done by the physician or dentist of their choice for a fee, or at the free school clinic for nothing.

11. We find that the Public Nursing Association is conducted by an organiza-



tion of citizens, has its headquarters in the city building, adjacent to the health department, and that it is in close affiliation with that department and with the municipal free clinic. We have reason to believe that this association is an important agency by which the material for the clinic is augmented.

12. We find that the purpose of the municipal free clinic is presumably philanthropic, there being no teaching function appertaining thereto, and the staff being stationary and uncompensated. We wonder that the burden of a medical philanthropy so unrequited is not more widely and evenly distributed.

13. We find that this burden is augmented because the benefits of the free clinic are not limited strictly to the indigent. We feel that the clinic would be far less burdensome to its sponsors, more popular with the medical profession and less a source of friction, if restricted properly, and staff service rotated, so that different groups of men might share in the onerous duties of such service as well as its possible benefits.

#### RECOMMENDATIONS

As a condition of the approval by this society of the free clinic, we recommend that this clinic be operated solely for the indigent. We further recommend that proper and adequate questionnaires be taken in the case of every applicant; that a social investigation be made in all cases where eligibility is doubtful; and that in the course of these inquiries the testimony and recommendation of physicians be taken, wherever possible.

We recommend that a standing committee of three or five be appointed each year from this society, to act in an advisory capacity with the management of the municipal free clinic and with those in charge of other free public health activities in Shawnee county in the matters of organization, regulation and general scope of these activities. That this committee be required to report from time to time to the society, such report to be the basis for approval or disapproval of these free medical agencies.

We recommend that school nurses, as well as all other public nurses, be urged to desist from the making of diagnoses

or prescribing treatment or operations for pupils or adults, or telling them where to go to get treatment or operation, whether free or otherwise, except in such cases as may be properly the recipients of general charity.

We recommend that the free immunization of children be restricted to those who, on investigation, are found unable to pay for such service. To this end, the recommendation of a physician, or possibly a teacher, might be accepted. We further recommend that physicians cooperate with the health department, by making group immunizations and family immunizations less burdensome, financially, to those of scanty means.

Respectfully submitted,

Signed: O. P. DAVIS,  
H. A. ALEXANDER,  
M. G. SLOO,  
JAMES G. STEWART,  
C. E. JOSS.

February 6, 1928.

Owing to the lateness of the hour, the report was laid on the table for final consideration at the April meeting.

EARLE G. BROWN, Secy.

#### DICKINSON COUNTY SOCIETY

The Dickinson County Medical Society met at Hotel Worthington, Herington, Kansas, February 23. Supper was served to the visiting doctors by the Herington physicians. Those appearing on the program were:

Dr. Kroesch of Enterprise, Kansas, with a paper on "Some Pathological Affection of the New Born Infant."

Dr. Loomis of Herington, "Maintenance of Fluid Balance in the Body Economy."

Dr. Peterson of Herington, "Results Obtained with Liver Extract in the Treatment of Hypertension."

Dr. E. J. Reichley was elected delegate to the state convention.

The Dickinson County Society will be hosts to the Golden Belt Medical Society the first Thursday in April at Abilene, Kansas.

DANIEL PETERSON, M.D., Secy.

An Irishman editor once said: "I can see no earthly reason why women should be allowed to become medical men." His ignorance of anatomy saved him.

## DEATHS

William Stout, Larned State Hospital, Larned, aged 43, was killed in an automobile accident February 19. He graduated from the St. Louis College of Physicians and Surgeons in 1908. He was a member of the Society.

Claudius Aubrey Smith, Pittsburg, aged 58, died February 1, of angina pectoris. He graduated from Barnes Medical College in 1899. He located in Pittsburg more than twenty years ago and some years later established the Smith Clinic. Dr. Smith was a member of the Society.

Charles David Forney, Wichita, aged 50, died January 17 at Wilmore, of heart disease. He graduated from the St. Louis College of Physicians and Surgeons in 1902.

John B. Armstrong, Gardner, Kansas, aged 84, died September 25, 1927, of angina pectoris. He graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in 1868.

Edward Bell Payne, Fort Scott, aged 61, died January 4 of heart disease. He graduated from the University Medical College, Kansas City, Missouri, in 1889 and Bellevue Hospital Medical College, New York, in 1890. He was a member of the Society.

Mamie J. Tanquary, Independence, aged 57, died December 31, 1927, at Chanute, of acute cholecystitis. She graduated from the College of Physicians and Surgeons, Kansas City, Kansas, in 1901. She was a member of the Society.

Dr. W. F. Taylor, aged 72, died February 10, 1928, of angina pectoris at his home in Ashland, Kansas. Dr. Taylor was born in Washington, Ky. He graduated from the Kentucky School of Medicine in 1881. He was a member of the Society.

Charles A. Dudley, Pittsburg, aged 47, died January 23, of lobar pneumonia, at St. Joseph's Hospital, Kansas City, Mo. He graduated from the University Medical College of Kansas City, Mo., in 1906. He was a member of the Society.

Francis Marion Thomas, Blue Rapids, aged 86, died December 7, 1927, of hypostatic pneumonia. He graduated from Bellvue Hospital Medical College, New York, in 1869.

—————R—————

## MEDICAL SCHOOL NOTES

Dr. Frank C. Neff held a Children's Clinic at the Clay County Medical Society, Clay Center, Kansas, February 10, 1928.

Dr. Richard L. Sutton was the guest of the Woman's Club of Emporia, Kansas, at their annual meeting on January 24.

Dr. O. J. Dixon attended the meeting of the Middle Section of the American Laryngological, Rhinological and Otolological Society at Davenport, Iowa, February 6 and appeared on the program.

The following members of the Bell Memorial Hospital Staff appeared on the calendar of "Public Health Talks" under the auspices of the Health Conservation Association:

Dr. C. B. Francisco, Teachers' College of Kansas City, Mo., January 23; subject, "Posture."

Dr. I. J. Wolf, Teachers' College of Kansas City, Mo., February 3, 17; subject, "Nutrition."

Dr. L. G. Harrington, Lions Club of Kansas City, Mo., February 7; subject, "Mental Hygiene for Children."

Dr. E. T. Gibson, WDAF, School of the Air, February 15; subject, "Need for a Country Psychopathic Hospital."

Dr. Roy T. Mills gave a radio address on "Heart Disease" from the broadcasting station of the Kansas City Star, February 1.

At the meeting of the Jackson County Medical Society, February 21, Dr. O. J. Dixon talked on "Samuel Pepys, A Medical Observer" and Dr. Logan Clendening talked on "Medieval Medicine."

Dr. Jesse R. Haley and Dr. Henry Schneiderman have recently been appointed for the Dispensary Staff. Dr. Haley is Assistant in Medicine and Dr. Schneiderman is Assistant in Dermatology.



Dr. C. C. Nesselrode recently held a Surgical Clinic at the Academy of Medicine meeting.

Dr. P. M. Krall discussed "Differentiation of Nephroses and Nephritides" before the Academy of Medicine at one of its recent meetings.

Dr. R. H. Major talked on "Use of Synthalin in the Treatment of Diabetes" before the Academy of Medicine, January 27.

Dr. E. T. Gibson held a Neurological Clinic before the Academy of Medicine, January 27.

"Intravenous use of Sodium Salicylate in the treatment of Varicose Veins" was discussed by John G. Hayden and Dr. F. C. Helwig before the Academy of Medicine February 10, 1927.

Dr. C. C. Dennie held a Dermatological Clinic before the Academy of Medicine, February 10, 1927.

Dr. P. T. Bohan was elected Vice President and Dr. O. J. Dixon, Secretary of the St. Luke's Hospital staff at a recent meeting.

Dr. G. E. Knappenberger and Dr. F. C. Helwig discussed "Clinical Heart Diseases" and "Cardiac Pathology" respectively, before the Ottawa County Medical Society, Ottawa, Kansas.

At the last meeting of the Jackson County Medical Society the following men discussed "Biliary Tract Diseases": Dr. E. H. Hashinger, Dr. T. G. Orr and Dr. F. C. Helwig.

Dr. H. R. Wahl, Dean of the Kansas University Medical School, attended the annual meeting of the Council of Medical Education of the A.M.A. February 6 and 7 at Chicago, Illinois.

The following members of the Senior Class of the Kansas University Medical School have been appointed for internship next year at the Bell Memorial Hospital: Dr. A. D. Johnston, Dr. H. W. Anderson, Dr. J. A. Billingsley, Dr. O. W. Longwood, Dr. J. L. Collins, and Dr. A. T. Steegman.

A class of 56 sophomores were enrolled in the Kansas University Medical School from the Lawrence Division of the

Medical School. This is the largest class ever enrolled.

The following former graduates of the Kansas University Medical School recently visited at Bell Memorial Hospital: Dr. H. E. Marchbanks, Pittsburg, Kansas; Dr. O. T. Blanke, Columbus, Kansas; Dr. Adolphe Boese, Coffeyville, Kansas, and Dr. Walter Stephenson, Edmond, Kansas.

Dr. R. M. Isenberger has accepted an appointment for the coming summer at the Mayo Clinic with Dr. Rowntree.

## R BOOKS

The Medical Clinics of North America (issued serially, one number every other month.) Volume 11, Number 4, (Brooklyn Number, January, 1928.) Octavo of 277 pages with 53 illustrations. Per Clinic year, July 1927 to May 1928. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

The Brooklyn number of the medical clinics has first a clinic by Moses presenting some problems in diagnosis—a case of multiple serositis, a case of Raynaud's disease and a case of pneumonia of tuberculous origin. Joachim presents two cases of ascites. Smith presents some cases of intracranial hemorrhage of newborn. Howard discusses compensation and repair and presents a number of cases. Shookhoff discusses the tachycardias. Myerson presents some cases illustrating bronchoscopy in lung suppuration. Embolism and thrombosis of abdominal aorta is discussed by Banowitz and Ira. Babinowitz reports some cases of toxic hepatitis following the use of atophan. Cross describes the clinical types of cardiac failure. These papers are picked at random from a considerable number fully as interesting and instructive.

Bedside Diagnosis. By American Authors, edited by George Blumer, M.D., Clinical Professor of Medicine, Yale University, School of Medicine; Attending Physician to the New Haven Hospital. Three Octavo volumes, totalling 2820 pages, containing 890 illustrations. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, \$30.00 a set. Separate desk index volume free.

One particular feature of this very excellent work will commend it to the general practitioner and that is the evident purposes of the contributors to stress the importance of observations by the unaided senses.

In the discussion of the electrocardiographic method in diagnosis the author says: "One who is skilled in electrocardiography and has carefully studied the associated clinical manifestations of disordered action of the heart, seldom needs to make use of the electrocardiographic method in diagnosis." He does not condemn the cardiograph, however, as only few have yet learned all it can teach them. The first volume covers the subjects of infections and intoxications, dietary deficiency, physical agencies, metabolic diseases, developmental diseases, locomotor and digestive systems. The second volume discusses the liver and gall-bladder, pancreas, peritoneum, bronchi and lungs, mediastinum, circulatory system, blood, lymph glands, spleen, and urinary system. The third volume covers the endocrine system, the nervous system.

It is needless to say that this is one of the most elaborate works on diagnosis that has been published.

**Baby's Health—Day by Day.** Published by The Professional Press, Chicago.

This is a little diary arranged for the mother or nurse to record the hours of feeding, the amount and character of food, the outdoor periods, bath, sleep, temperature, bowel movements and weight each day. And at the week end a blank is provided for a summary of progress.

**Physical Diagnosis** by Charles Phillips Emerson, A.B., M.D., professor of medicine, Indiana University School of Medicine. Published by J. B. Lippincott Company, Philadelphia.

The arrangement of the text in this book is rather unique but should appeal to the student and the practitioner for its convenience. After a general introduction and a discussion of general physical characteristics he presents the normal and abnormal features of the general body surface. The next chapter deals with the head, and in regular order the chapters follow on the spine and thorax, the heart, the abdomen, the extremities. Under the proper heads all the diagnostic points of the various pathologic conditions are brought out.

**Physical Diagnosis** by W. D. Rose, M.D., associate professor of medicine in the University of

Arkansas. Fifth edition. Published by C. V. Mosby Company, St. Louis. Price \$10.00.

The principal changes that have been made in this revision are in the discussion of heart disease, in the pathologic physiology of which there has been considerable advance. The author has endeavored to emphasize the significance of physical signs and point out also their limitation. Some change has been made in the sections dealing with endocarditis and with pulmonary tuberculosis. The text is carefully illustrated with appropriate drawings.

**Neoplastic Diseases.** A treatise on Tumors. By James Ewing, M.D., Sc. D., Professor of Pathology at Cornell University Medical College, New York City, Third Edition, Revised and Enlarged. Octavo of 1127 pages with 546 illustrations. Philadelphia and London: W. B. Saunders Company, 1928. Cloth \$14.00 net.

Some changes have been made in the text in this edition. Some chapters have been rewritten and a good many reclassifications have been made. The subject of brain tumors has been developed to conform to recent contributions in this field. There has also been added a considerable number of new illustrations.

—————R—————

### **Whooping Cough Immunization**

Vaccine for prevention and treatment has at times been condemned and, more frequently, heartily advocated. Vaccination seems to succeed when the conditions are favorable—in other words, when the vaccine is given soon enough and in doses large enough.

Quick action being so important, a new antigen is now offered by Parke, Davis & Co.—an antigen that contains no bacterial bodies, and in the use of which, therefore, there is no waiting time, the antigen being in solution and ready for instant action on the body cells.

This new product is said to be an ecto-antigen, since it is obtained by the simple process of washing or rapidly "extracting" the pertussis bacilli with saline solution, and clarifying the "extract." The percentage of protein in this antigen, offered to the profession as Pertussis Immunogen, is very much less than that contained in bacterial vaccines; and the Immunogen is no more toxic, we are told, than the chemical preservation it contains.



# Frankly---

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Very truly yours,

E. F. De VILBISS, M. D.,  
Superintendent.

Office 917 Rialto Bldg., Kansas City, Mo.

Pertussis Immunogen is described and its rank as a prophylactic and therapeutic agent pointedly discussed in a booklet offered to physicians by Parke, Davis & Co.

—R—

### Bathroom Heater as a "Patent Medicine"

Electric heaters, dignified by the name of infra-red generators and adorned with enamel and nickel, are being sold to the public at high prices as potent therapeutic agencies. The book of uses which always accompanies a bathroom heater when it is sold as a therapeutic agent, usually appears to be the work of one whose chief qualification was that he had access to a medical dictionary. True, these lamps generate infra-red rays, but so does a steam radiator or any other hot body. (J. A. M. A., Feb. 4, '28).

—R—

### Prevention of Colds by Ultraviolet Radiation

In 1926, Barenberg, Friedman and Green found that infants exposed to ultraviolet radiation improved in general health during the first month of treatment but contracted an increased number of colds during the second, third and fourth months. Accordingly, Maughan and Smiley attempted to administer a quantity of ultraviolet radiation equivalent to that to which the ordinary city dweller is exposed during the summer. They conclude that irradiation, resulted

in a reduction in the frequency of colds. Barenberg and Lewis have completed further experiments in which over-radiation was guarded against. Their results were no better than before. On the one hand are well controlled experiments with negative results in which the dosage was large. On the other hand are imperfectly controlled experiments and success which the investigators attribute to low dosage. Positive statements, faith and investments may well await further evidence. (J. A. M. A., Feb. 18, '28).

**DENTIST WANTED**—Fine opening for a good dentist in Wichita. Modern front flat of 5 rooms over a Dry Goods and Shoe Store, 1223 East Douglas. Was occupied by Dr. Kunce for nearly three years. More lines of different kinds of business in this block than in any other block east of St. Francis Avenue. Four street car lines pass the door of this building, etc. See or address L. A. O'Donnell, M. D., 1225 ½ East Douglas.

**WANTED**—Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

### WANTED

I am physically unable to do general practice. Have been in continuous practice for seventeen years in a Kansas County Seat of 1800. Own my office building and a modern Physiotherapy and X-Ray equipment. Have nothing to sell. Will take a recent graduate as a partner. If interested write me.

J. T. SCOTT, M.D.  
St. John, Kan.

## The Radium Hospital of Omaha

DR. D. T. QUIGLEY, Director.  
Omaha, Nebraska



### THINK OF RADIUM FIRST IN

1. All local accessible Cancer (cancer of cervix, face, skin, hands and feet, mouth, lip, throat, larynx, esophagus, rectum, eyelids, ears, antrums, etc.)
2. Exophthalmic oiter.
3. Enlarged Prostate Gland.
4. Hodgkins Disease.
5. Enlarged Spleen.
6. All chronic, low grade infections (including old sluggish boils and carbuncles).
7. Uterine Fibroid.
8. Uterine bleeding.
9. All Sarcomas.
10. All Birthmarks and Angiomata.
11. All chronic low grade tonsil infections (except where abscess is present).
12. Tuberculosis of the skin.
13. Tuberculosis of glands.
14. Eczemas (old, localized).
15. As pre-operative treatment in cancer of the breast.
16. Urethral Caruncle

A radium tube or needle is a surgical instrument; and as in the use of any other surgical instrument, fundamental knowledge, skill, and experience are necessary to get good results.



## RELAXATIVES

\* \* \*

Mental indigestion is the cause of so much dyspeptic thinking.

\* \* \*

Our position in the world depends upon our disposition.

\* \* \*

There are nineteen ways to arrive at a wrong diagnosis and but one way to getting a right one.

\* \* \*

Children are not getting worse. They only know what we know.

\* \* \*

Chaulmoogra oil is extracted from the dried fruit of the hydnocarpus tree. Trying to pronounce the name of the oil and the tree is good vocal exercise, and they are talismanic words also.

\* \* \*

It is better and more profitable to prevent poverty than it is to distribute charity.

\* \* \*

Plato said: "The wicked are wicked because of their organisms."

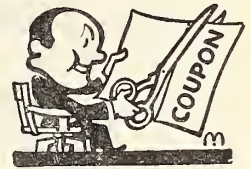
\* \* \*

Sterilization of the homo sapiens is being practiced "pretty respectfully" on the Pacific coast. A large per cent of them are women.

\* \* \*

Energy has been converted into matter with the aid of the cathode ray, by a Russian scientist at the Reral Polytechnic? When the cathode ray gets in good running order nad turning out matter the food problem will be solved.

## COUPON CUTTING



is the consequence of investing a large part of your income, which, of course, you cannot spend at the same time. Even at that, it is a mighty fine sensation! But consider . . . an uncollected account of \$5.00 is the equivalent of a year's yield on a \$100.00 bond. Or if you purchased \$10,000.00 worth of 5% bonds, the annual \$500.00 coupons would be no better than \$500.00 collected by us from those old, difficult accounts that we know so well how to handle without offending! We have had years of experience in

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and leaving their patients stauncher friends than ever. In our dependable business-like service there are no charges of any sort until we collect, and the account reverts to you at the end of the year if you wish. Send for a copy of our contract.

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Duke—

2nd Edition

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By Wm. W. Duke, Ph.B., M.D., Author of "Oral Sepsis in Its Relationship to Systemic Disease," etc. Kansas City, Mo.

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### The Minute Circulation of the Cerebro-Spinal Substance

J. T. SCOTT, M.D., St. John.

Paper read before the Kansas State Medical Society at Hutchinson, Kansas, May 4, 1927.

In presenting this abridged study of the minute circulation of the cerebro-spinal substance it is perhaps unnecessary to disclaim originality and it would seem but just to give due credit to the man who first conceived and proclaimed it.

In his monumental work, *Internal Secretions and the Principals of Medicine*, Sajous found it impossible to account for certain physiological and physical phenomena if confined to the prevailing conception and teaching regarding the cerebro-spinal circulation. He, therefore, began an exhaustive study of the subject the results of which are incorporated in the above mentioned work. He introduces the subject by saying such a circulation as that I suggest by this title is not thought to exist. Both in the central ganglionic and in the cortical arterial systems the arteries are now believed to be "terminal": i. e., to neither supply nor receive an anastomotic branch. They penetrate the cerebral substance to terminate there. The veins are similarly disposed. Deprived of valves and muscular tissue, they are likewise considered terminal in the sense attributed to that word in respect to the arteries: a normal outcome of the absence of connection with the latter as supposedly indicated by the impediment presented to the injection of fluids in them. And yet, how does the blood, with its corpuscles, find its way from the arteries to the veins? Does it filtrate through the arterial walls, find its way through the lymph spaces to the venous walls, and reach the sinuses? Of course we have elsewhere in the organism both the effusion of plasma

and the emigration of corpuscles through vascular walls; but this is a process of a different kind, and for which the blood stream only plays the part of purveyor; it represents the main factor of a reparative and protective function, of which, indeed, the cerebro-spinal system is a prominent beneficiary when need be. There is a wide margin, however, between this process and the mechanism of circulation, which includes channels beginning at the heart and ending in this organ, and having for its purpose, not only to carry oxygen to all parts of the organism, but also to rapidly remove blood as fast as its oxygen ratio is being reduced. "Terminal" vessels do not satisfy this sine qua non of perfect metabolism in the cerebro-spinal system, notwithstanding the presence in the superficial structures of more or less close capillary networks. Indeed, the very presence of these capillaries seems to point to these deeper "terminals" as incongruities.

That there must be provision whereby perfect metabolism in these important structures is assured appears as a necessity. In all the tissues and organs of the body the circulatory arrangement is that of direct continuity from artery to vein save in the case of the cerebro-spinal system. Here is found a different arrangement.

To properly appreciate the difficulties encountered in the prevailing conceptions and teaching on this subject it may be well to recall the anatomy of the cerebral circulation. Gray states that the cerebral arteries are derived from the internal carotid and the vertebral, which at the base of the brain form a remarkable anastomosis known as the circle of Willis. It is formed in front by the anterior cerebral arteries, branches of the internal carotid, which are connected together by the anterior communicating;

behind by the two posterior cerebrals, branches of the basilar, which are connected on each side with the internal carotid by the posterior communicating. From the circle of Willis arise the three trunks which together supply each cerebral hemisphere. From its anterior part proceed the two anterior cerebrals, from its antero-lateral part the middle cerebrals and from its posterior parts the posterior cerebrals. Each of these principal arteries gives origin to two very different systems of secondary vessels. One of these systems has been named the central ganglionic system, and the vessels belonging to it supply the central ganglia of the brain; the other has been named the cortical arterial system, and its vessels ramify in the pia mater and supply the cortex and adjacent medullary matter. These two systems, though they have a common origin, do not communicate at any point of their peripheral distribution and are entirely independent of each other. Though some of the arteries of the cortical system approach, at their terminations, the regions supplied by the central ganglionic system, no communication between the two sets of vessels takes place, and there is between the parts supplied by the two systems a border land of diminished nutritive activity, where, it is said, softening is especially liable to occur in the brains of old people. The vessels belonging to the central ganglionic system are larger than those of the cortical system and are what Cohnheim has termed "terminal" arteries; that is to say, vessels which from their origin to their termination neither supply nor receive any anastomotic branch, so that by one of the small vessels only a limited area of the central ganglia can be injected; and the injection can not be driven beyond the area of the part supplied by the particular vessel which is the subject of the experiment. The vessels forming the cortical system are the terminal branches of the anterior, middle and posterior cerebral arteries which divide and ramify in the substance of the pia mater and give off nutrient arteries which penetrate the cortex perpendicularly. These nutrient vessels are divisible into two classes, the long and short.

The long, or, as they are sometimes called, the medullary arteries, pass through the gray matter to penetrate the centrum ovale to the depth of about an inch and a half, without intercommunicating otherwise than by very fine capillaries, and thus constitute so many independent small systems. The short vessels are confined to the cortex, where they form with the long vessels a compact network in the middle zone of the gray matter, the outer and inner zones being sparingly supplied with blood. In view of all this it seems reasonable that some circulatory mechanism must exist in lieu of that which obtains in all other tissues and organs and fulfills for them every requirement of perfect metabolism and function. That it does exist is a fact, demonstrated by ample and convincing proof. The credit for its discovery and interpretation belongs solely to the author of *Internal Secretions and the Principles of Medicine*.

According to the teaching of Sajous the so-called "terminal" vessels are not, as now conceived, terminal, but are directly connected with the protoplasmic processes of nerve cells which are in reality minute canals serving as channels for the passage of blood plasma. In fact his conception involves the substitution of nerve elements for capillary vessels as the connecting medium between the arteries and veins of the cerebro-spinal system.

All this would seem to necessitate a restudy of, and probably an alteration in, our knowledge of the histological construction of nerve elements, otherwise it will be difficult for us to understand now it is possible for a protoplasmic nerve fiber to become the extension of a terminal blood vessel.

Nerve substance is grossly divided into white and gray matter, the former being composed mainly of fibers and their surrounding elements and the latter of cells and their dendritic processes. There are, as we have seen, comparatively few blood vessels and no lymphatic vessels. In addition to these there is a so-called supporting structure or frame work known as neuroglia composed of cells and delicate interlacing fibers. There are two



kinds of neuroglia cells, the stellate and the mossy or dendritic. Heretofore the neuroglia was endowed with no function save that of supporting tissue; to that has been added by Sanjous the much more important function of furnishing the circulating mechanism of the intimate cerebro-spinal structures. If then these neuro-fibrils are in reality minute canals through which blood serum flows what is the nature of the anatomical connection between them and the blood vessels? Again I quote from Sajous who says that the manner in which the neuroglia cells and their fibers are connected with blood vessels suggests that they are essentially different structurally, the neuroglia elements being, not branches or subdivisions of the vascular system, but nervous structures which, at a given time during embryological development, become affixed to the vascular walls. In other words, each neuroglia-fibril is affixed to the wall of the vessel either directly or through the intermediary of a neuroglia cell, and therefrom extends to the main, or apical dendrite or dendrites of some neuron. In addition, says the writer, this enables me to conclude that a neuron receives its nutrition and its oxidizing substance directly from the general circulation and the blood which enters by way of the apical dendrites is distributed to the free dendrites and to the cell body. We are next concerned with the question, how does the blood leave the axon of the neuron in the substance of the brain and cord? This question plainly resolves itself into the following: How does the blood reach the veins from the axon? Gray says that the perivascular lymphatics are especially found in connection with the vessels of the brain, these vessels being enclosed in a sheath which acts as a lymphatic channel, through which the lymph is carried to the subarachnoid and subdural spaces, from which it is returned to the general circulation. Now when we consider, as will be later demonstrated, that perineural as well as perivascular spaces exist, we can readily realize that by linking the axon of a neuron to a venule, with a lymphatic space as intermediary, we have the elements of a mechanism which not only

utilizes structures that are known to be present in the cerebro-spinal axis, but which satisfy the needs of the function. Finally, if an axon is itself buried in a perineural sheath, which in turn communicates with a vein through stomata, as is the case in nerves, the blood of an axon is provided with a clear path to the general blood stream.

We have previously stated that there are perineural as well as perivascular lymph spaces and that these surround not only the cell body but the branches as well. This same system of lymph spaces and canaliculi is found surrounding the bodies and dendritic processes of the neuroglia cells and is directly continuous with the peri-vascular lymph spaces. It does not seem, however, possible that the cellular elements of the blood stream, the red and white corpuscles, circulate in the delicate tubes of the nerve fibers. In fact the histological construction appears as a provision of nature against it. This will become clear if we remember that there is a peri-neural lymph space also a peri-vascular lymph space. If we now place these two vessels in juxtaposition it is apparent that there are two spaces between the blood vessel and the nerve fiber or cell. Blood cells may readily pass through the capillary wall, as is their custom, into the peri-vascular lymph space, but here is met a limiting membrane of a different histological construction, provided with very fine stomata through which it is next to impossible for a cell to pass. That which does pass is the lymph laden with its oxygen carrying principle, its nutritious and its anti-bacterial elements.

We have so far considered the circulation of the cerebro-spinal substance only and have seen that this mechanism provides for both function and nutrition. If it is true of the cerebro-spinal substance it must be equally true of the entire nervous system. The anatomical unit of the nervous system is the neuron, hence the entire system may be considered as an organ composed of an innumerable number of neurons. Now a neuron is composed of a cell body and numerous branches known as dendrites and one larger main branch, the axis-cylinder or

neuraxon. These axis-cylinders leave the cells of the cerebro-spinal axis and are distributed ultimately to all the tissues and organs of the body. Their histological construction is similar to those in the brain and cord in that the neuraxon is made up of hollow fibrils surrounded by myelin, the so-called medullary sheath, which is in turn surrounded by a fibrous envelope, the neurilemma. In the course of the nerve the myelin sheath is interrupted at regular intervals giving the fibre the appearance of constriction at these points, the so-called nodes of Ranvier, where the only covering of the axis-cylinder is the neurilemma. The nerve then is really a series of inter-nodal segments which recalls the arrangement of muscle cells. If the myelin or medullary sheath takes part, as we have suggested, in nerve function and nutrition it would seem necessary that some mechanism should exist whereby a free circulation could take place in its substance. Gray says, "in addition to these interruptions, the nodes of Ranvier, oblique clefts may be seen in the medullary sheath, subdividing it into irregular portions, which are termed medullary segments or segments of Lauterman."

W. H. Wynn refers to the researches of Rezzonico and Golgi, who from the examination of fibres treated by a mixture of bichromate of potash and osmic acid, and afterwards by nitrate of silver, find that each cleft is occupied by what appears to be a thread of darkly stained substance passing spirally around the fibre. They consider that the supporting frame work of the sheath consists of a chain of funnels surrounding the axis cylinder, each funnel being formed by a spiral thread. McCarthy has shown that after a nerve has been hardened with picric acid and ammonium chromate the medullary sheath contains minute, rod-like structures, which pass rapidly between the axis cylinder and the primitive sheath so as to give the cross-section of a fibre the appearance of a wheel. Finally he refers to the fact that Lauterman, von Stilling and Roudinousky all believe that there is a system of hollow canals in the sheath of the axis cylinder and that the cones they form are protoplas-

mic. He divides each cone into six segments placed at regular distances apart and converging from the primitive sheath to the axis cylinder. If we now consider the segments as canaliculi leading from the axis cylinder, we can readily see how the blood plasma can penetrate the myelin and these substances, when brought into contact, carry on a reaction similar to that which occurs in muscle fibre. In other words, when the oxidizing substance of the blood plasma is brought into contact with the myelin, there occurs a reaction in which chemical energy is liberated. We are thus provided, it would seem, with a reasonable conception of how the nervous system functions and is nourished.

It remains to be stated that the nerves distributed throughout the body, being constantly bathed in lymph, probably admit it at the nodes of Ranvier to the axis cylinders, which furnishes an additional supply to that furnished by the dendrites. This would seem to indicate a provision of nature whereby a reserve supply of oxidizing substance is made available in case of need, suggesting thereby its great importance.

If the theory presented is based on demonstrable facts then it must follow that it is no longer a theory but an established truth. To speak of a minute cerebro-spinal circulation as separate and distinct from the general circulation and yet intimately connected with it no doubt seems to most of us extraordinary but through investigation will prove not only its reasonableness but to my mind its necessity.

I have discussed in this paper only what is suggested in the title and have taken for granted the conception presented as touching the histological construction of nerve elements. It may be that not every one will give assent to such conception. My reason for not entering into a discussion of these matters is that it would carry me entirely beyond a reasonable limit.

I may conclude by saying that there are other things connected with this teaching which are as unorthodox as that of the circulation of the nervous system and are as important if not more so.



Among them may be mentioned the tubular character of all nerve fibers whereby they serve as circulatory elements, the endowment of the myelin of nerve fibers with the important function of aiding in nutrition and the generation and reinforcement of nerve impulses instead of the accepted teaching that it is simply an insulating substance, the chemical composition of the blood serum which circulates in the nerve fibers and by virtue of which nerve impulses are generated, the nature and function of the dendritic neuroglia cell which is endowed with the important function of neuraxon co-ordination. In fact we are provided, through the medium of this advanced teaching, with the means of approaching a reasonable understanding of the heretofore baffling and mysterious physical and psychical phenomena to which, under present day teaching, no discernable line of approach appears.

—R—

### **Surgical Disease of the Biliary Tract**

H. C. EMBRY, M.D., Great Bend

Paper read before the Kansas State Medical Society at Hutchinson, Kansas, May 4, 1927.

With the exception of neoplastic disease, and rare degenerative conditions resulting from toxic poisoning, the prime factor in surgical disease of the biliary-tract is, no doubt, due to some form of bacterial infection.

Bacterial invasion of the biliary-tract may give rise to the inflammatory phenomenon of acute or chronic cholecystitis, with or without stone; cholangitis, choledochitis, pancreatic-lymphangitis, and pancreatitis. The manner in which infection reaches the bile passages is still a matter of controversy.

Three avenues of entrance into the biliary-system are usually considered.

First, by direct extension through the common duct from the intestinal tract. This was once believed to be the most likely avenue of infection.

Second, the infection may be hematogenous in origin and bacteria may enter through the portal system or the hepatic artery.

Third, it may enter through the lymphatics. This last avenue of entrance has only recently received the considera-

tion it merits, and it is probably the most important.

With the lodgement and activity of bacteria in the biliary tract, we may expect the usual sequelae of infection, varying according to the virulence of the invading microorganism, the resistance offered by the structures affected, and the anatomy of the part of the tract involved. The disease may range from a mild acute short lived infection to a violent fulminating and gangrenous process, or from an almost symptomless catarrh to a chronic inflammation with acute exacerbations, each attack leading to greater and more permanent damage.

Many investigators believe in the inflammatory origin of the bilirubin-calcium stones as well as the cholesterin pigment stones due primarily to the action of bacteria in causing a stasis in the flow of bile. On the other hand, the majority, probably above 70 per cent, of patient's suffering from gall stones are parous women, and in them the symptoms often date from pregnancy.

Sir Berkeley Moynihan, lecturing to American physicians at Leeds in 1925, made the statement that he and his co-workers had been able to determine a definite increase in the cholesterin content of the blood of pregnant women as early as the sixth week. And that the cholesterin content of the blood constantly increased with the advancement of pregnancy until about the time of delivery, when blood analysis invariably showed an increase of cholesterin in the blood of approximately 100 per cent above the normal findings in the non-pregnant state.

After delivery the cholesteremia slowly subsided, reaching normal again approximately six months after confinement.

This observation is of special interest when we remember that parous women especially suffer from cholesterin type of stones and that they contribute about 70 per cent of gall-bladder disease. Promising experiments are now being carried out at Leeds with the hope of controlling the cholesteremia of pregnancy by various cholesterol free diets. It is to be hoped that this rather promising and valuable observation may result

in some noteworthy advance in the prevention of this particular type of biliary disease.

Whatever may be the origin of stones the practical importance to be derived from this discussion is to remember that it is not for the stone, but for relief of the inflammation associated with its presence that surgery is demanded.

Inflammation of the biliary-tract may lead to a more or less mild or severe cholangitis or cholecystitis with or without formation of calculi. Whether the infection in the liver and ducts precedes or follows infection in the gall-bladder can not always be determined, but infection of one without the other is rare.

Generally speaking, the liver is first affected in the form of an acute hepatitis with cholangitis which usually subsides under medical treatment, but repeated attacks of acute infection may lead to chronic hepatitis and choledochitis independently, which, however, are frequently associated with chronic cholecystitis and cholelithiasis, it is for this reason, as well as for its similarity to other conditions in the gall-bladder region, that the diagnosis of hepatitis and cholangitis is not easily made.

One of the symptoms of infection is recurring jaundice. The liver may or may not be enlarged. Kehr thinks it is in 15 per cent of cases, Graham finds it so in 87 per cent, Judd reports hepatic enlargement as rather infrequent.

If the bile-passages do not become infected the disease is always mild. But it is always difficult to tell whether the jaundice is due to obstruction of the common-duct by a stone or to a choledochitis or pancreatitis, causing secondary obstruction and it must be remembered that malignancy may produce obstruction. Therefore, cases of prolonged jaundice, should be explored in order to determine and treat the underlying condition by drainage of gall-bladder or common-duct according to indications. As a result of persistent infection of the bile passages, we naturally have cholecystitis unaccompanied by stones in some 20 per cent of cases.

The symptoms of non-calculous cholecystitis are much like those of the calculous disease, and in both it is the de-

gree of infection and the resultant inflammation that dominates the picture.

I am convinced that chronic non-calculous cholecystitis bears a definite relation to the upper abdomen and is a much more frequent pathologic entity than we have hitherto supposed. In fact it is usually the fore-runner of more serious disease and therefore is of paramount surgical importance.

The damage done by a single attack of acute cholecystitis is apt to persist so that with each recurrent attack the lesion is aggravated; moreover experience and experiment have shown that these lesions rarely remain confined to any one viscus.

The association of cholecystitis with duodenal ulcer and appendicitis is too common an occurrence to be merely incidental. As a rule, early symptoms of disease of the bile-passages are sufficiently definite and prolonged to command more adequate clinical attention than they usually receive.

It is peculiar and interesting to observe that many human ailments, which present less definite and certain symptoms than disease of the bile-passages, have been so accurately studied by doctors in general that disagreement concerning them is almost unknown. For instance, appendicitis is generally a less serious disease, and in its early and mild manifestations presents a less definite and less certain group of symptoms, and usually repeats the display of such evidence over a shorter period of time, than does disease of the bile-passages. Yet, physicians are so familiar with the various definite and indefinite symptoms of appendicitis that the menace from appendix disease has been largely removed.

I believe the same achievement is largely possible in the early and adequate treatment of disease of the bile-passages, if doctors in general would take the same interest in the various symptoms which are constantly associated with disease of the biliary tract.

Not unlike mild acute appendicitis, early attacks of cholecystitis usually subside under expectant treatment. However, this peculiar phenomenon so frequently associated with recurrent appendicitis has not deterred us from making



a thorough study of the early symptoms of appendix disease, which has resulted in a marked advance in the rational surgical treatment of appendicitis, that has proven so satisfactory to the public that almost every one has become more or less familiar with its early symptoms, with the result that a great number of appendix sufferers now seek early and adequate relief upon their own recognition.

It therefore seems reasonable to presume that an adequate acquaintance with the early and definite symptoms of disease of the bile-passages would prove equally interesting to our patients and bring about a similar attitude toward disease of the upper abdomen. I have often wondered why the patient with gall-stones was so reluctant to seek the surgeon and obtain relief, but one finds the answer when one takes the history. Such patients have usually been diagnosed and treated for acute indigestion, stomach catarrh, acute and chronic gastritis, hyperacid stomach and what not. They have usually been treated by a number of physicians and received various impressions of their illness from which they are not easily divorced, and they come to feel that no one knows much about their ailment, so they remain undecided regarding surgical treatment until late and results force them to the hospital, usually after great damage has been done. And last, but not least, often the surgeon falls far short of convincing such a sufferer, because of the lurking fear in his own mind that he may not be able to present the expectant patient with a handfull of gall-stones.

How different is the experience of the appendix patient. Every physician he consults assures him that his symptoms indicate appendicitis, and the surgeon assures him of the excellent diagnostic acumen of his local doctors. And there is always the appendix to show him, and the imposing and convincing report of the laboratory pathologist to confirm the diagnosis.

It seems that the failure of the gall-bladder patient to seek early relief is directly due to the failure of the profession to make a concerted and definite interpretation of the outstanding symp-

toms which point to disease of the bile-passages.

It is my custom never to use the term gall-stones or gall-bladder disease, when discussing upper abdomen symptoms with a patient, but to constantly use the term disease of the bile-passages. This usually leads to explanations which are enlightening to the patient.

Diseases of the bile-passages, when analyzed according to symptoms, usually fall into four groups:

1. Typical biliary colic group. These patients give a history of recurrent attacks of pain and tenderness in right epigastrium. The pain is sudden in onset, coming on at any time but more frequently at night, rapidly increases in frequency and severity, and radiates to the right, affecting the back, the shoulder, the neck or the arms, requiring morphine for relief. Nausea and vomiting, usually present, vomiting is not constant, but when present usually bile-stained.

The acute case is accompanied by chills and fever, may be followed by jaundice, bile may be found in the urine. The attack usually subsides in a few hours, but tenderness remains for several days.

The history is usually prolonged over several years, with attacks of increasing severity and frequency, at first intervals between attacks are free from symptoms but gradually marked indigestion develops between attacks. The outstanding symptom being belching of gas and distension after meals.

2. Typical biliary group. These cases do not have attacks of acute biliary colic at all, they complain of dull-ache in the right hypochondrium, associated with tenderness in the same region. It is frequently difficult to elicit tenderness in this group, but by careful examination a more circumscribed area can usually be noted than that in which pain is felt, although the pain may be mild and continuous.

The majority of cases have periods of remission. Fever, nausea and vomiting, accompany attacks while jaundice is inconstant.

3. Gastric group. I think this the most important because it contains perhaps the largest number of patients suffering

from various disease of the bile-passages, and contains the ones usually neglected by most of us. The digestive symptoms, as well as the clinical picture, often resemble those of peptic ulcer. The points of distinction are mainly in the relief of pain obtained by food or alkalis in the case of ulcer, and also in the case of ulcer there is no relation between the type of food and the pain. In other words the ulcer patient complains of pain no matter what he eats (quantitative food dyspepsia) while the gall-bladder patient usually finds that certain kinds of food bring on his digestive troubles (qualitative food dyspepsia).

These cases are usually treated for years for gastric catarrh, gastric or duodenal ulcer, or merely for dyspepsia without obtaining permanent relief. They are cases that confuse us and which require the most careful study. Radiograms of stomach and duodenum and cholecystography after proper preparation afford differential information of value in many cases. Examination of urine and feces are not to be overlooked.

The fact that the gall-bladder may reflexly simulate gastric pathology is now well known.

4. Biliary gastric groups. This group combines symptoms of the first and third groups. It may begin as group one and later have added to it the symptoms of group three or vice versa.

There is apparently little constancy in the clinical picture, in this group. Diagnosis of disease of the bile-passages is oftentimes apt to be confused with an inflamed appendix in a high position, and clinical differentiation between this type of appendicitis and disease of the gall-bladder is often impossible. Recurrent appendicitis is so frequently associated with biliary-tract disease that no operation in this region is complete without associated appendectomy if it is at all possible.

Fortunately the roentgenologist is becoming of very great assistance in helping us to evaluate upper abdomen symptoms, by well established methods he is able to discern and exclude many lesions of the stomach and duodenum. For instance, a stomach which shows no filling defect, which is of normal contour

and position, and which empties in the proper length of time, associated with a duodenal cap which fills properly and is free from defect or deformity, is negative information of very great value, when associated with upper abdomen symptoms.

Cholecystography is new, but is of value in both its positive and negative aspects, and best of all it will do much to stimulate interest in this rather neglected field.

Failure to visualize the gall-bladder after proper preparation of the patient, followed by administration and retention of the dye, while active gall-bladder symptoms are manifest is of very great value indeed, definitely pointing to obstruction of the cystic-duct and gall-bladder pathology.

My last three cases at St. Rose Hospital are good examples. All three entered the hospital, subsiding from severe acute attacks which were diagnosed gallstones. All three were properly prepared, all took the dye and retained it, all had the fat meals at the proper time. The *x-ray* department failed to visualize the gall-bladder in all three, all three were prepared again, two days later and cholecystographed with the same result. *x-Ray* reports in all three read, failure of gall-bladder to fill indicates gall-bladder pathology. At operation one had hydrops of gall-bladder which contained one free unfaceted stone, cystic duct no doubt closed by inflammatory reaction.

The second case presented a thickened gall-bladder, containing 123 stones with three large faceted stones impacted in cystic duct and one unfaceted stone in common-duct.

The third case showed a greatly enlarged and thickened gall-bladder buried in dense omental adhesions containing 220 stones of various sizes, with one large stone tightly wedged in the cystic duct.

The ability of our *x-ray* department to visualize the gal-bladder in many cases is manifest by a goodly collection of cholecystographs. The failure of the gall-bladder to fill properly is probably the most significant *x-ray* finding.

However the sole object of this paper is to point out that enough definite and



well known symptomatology of disease of the biliary-passages is sufficiently well known and well established to justify a concerted effort by doctors to acquaint themselves with the various symptoms associated with this as yet poorly treated group of maladies.

I feel that were we to take the same healthy interest in the symptomatology pointing to disease in the upper abdomen that we have in the symptoms pointing to disease in the lower abdomen with the better methods now becoming available for the more accurate evaluation of symptoms pointing to disease of the bile-passages, the public in general would soon become familiar with the true significance of this all too prevalent group of misunderstood and neglected symptoms.

I believe a more general interest in definite symptoms pointing to disease of the bile-passages would enable us to relieve the suffering and prolong the lives of many of our patients, and thereby widen our field of endeavor and enable us to serve our day and generation to greater purpose.

I can think of no more worthy challenge to the thoughtful medical man of today than the definite symptomatology pointing to early disease of the bile-passages.

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### **Nonpenetrating Wounds of the Abdomen**

J. R. CAMPBELL, M.D., Pratt, Kansas

Paper read before the Kansas State Medical Society at Hutchinson, Kansas, May 4, 1927.

This is a large subject and one that I will not attempt to discuss thoroughly, but will simply call attention to a few points, four in number, that have impressed themselves on me from personal experience, in the cases that I shall review with you.

First, the difficulty of diagnosis in many cases.

Second, the extremely slight sign of injury to the abdominal wall which may be accompanied by very severe intra-abdominal injury.

Third, the importance of local rigidity of the abdominal wall over the sight of the lesion.

Fourth, in handling these cases, where

there is doubt, one should do an exploratory laparotomy immediately.

#### **DIFFICULTY OF DIAGNOSIS**

The history of the case will often give one some idea as to whether there is a lesion of some of the viscera. For instance several years ago I saw an eight-year-old boy who was run over by a truck partly loaded with wheat, the wheel passing over the abdomen. Without much examination one could safely conclude that some of the abdominal viscera were injured. It was found that the intestine was torn across completely in two places as if cut by a knife. The boy was far from a hospital and although the bowels were repaired he succumbed to peritonitis in a short time. But the cases to which I particularly wish to call your attention are those which have received slighter violence and in which we do not know whether or not visceral injury has taken place, and these are the cases that are so deceiving. Frequently you can have a slight laceration of the stomach or of the intestine and the patient shows little sign of injury. If, however, you wait until he does show signs of visceral injury, this means that he will develop a peritonitis and the chances of saving the patient, after the signs have proved definitely that he has such an injury, are very small. If these patients are to be saved, one must act promptly.

With reference to this type of abdominal injury it seems that there is no intra abdominal organ that has not been injured by nonpenetrating violence to the abdomen. Everything in the abdomen has been recorded as having been injured. Of course, if it is a case of great violence, as a fall from a great height or being run over by a heavy vehicle, one at once thinks of an injury to the solid organs of the abdomen, especially the liver and spleen. If severe intra-abdominal injury has been sustained the patient is likely to have hemorrhage and if it be one of considerable amount one will be able to detect the signs of fluid and signs of hemorrhage, *i.e.*, increase in pulse rate, palor, air hunger, etc.

In addition to the liver and spleen the kidneys are subject to injury and also the pancreas. As to the involvement of the hollow viscera, the stomach, small

and large intestines, the gall bladder, and urinary bladder if distended into the abdomen, have a history of having been injured at some time.

#### SLIGHT SIGN OF INJURY WITH SEVERE INTRA-ABDOMINAL INJURY

As to the slight sign of injury to the abdominal wall itself, in some of the cases in which I have done laparotomies I have been surprised to find practically no signs of injury to the abdominal wall, although there was a very severe injury to the viscera within. This brings to mind a young woman whom I have recently seen, when returning to the house from gathering her eggs came upon an old grindstone frame sitting in the yard and tripped and fell down upon the corner of the frame, not knocking it over. She did not fall down, neither did she drop or spill her basket of eggs. Fifteen hours later she drove thirty miles in a car to my office, complaining of a severe pain in the region of the umbilicus. Upon opening the abdomen its walls showed little or no signs of injury, there were no abrasions or signs whatever of injury to the skin. Yet upon entering the abdomen one immediately encountered a lump in the meso-colon in the midline that proved to be a hematoma the size of a small grape fruit. The hemorrhage was arrested and the abdomen closed without drainage and recovery ensued. I have no doubt but that this patient would have gotten well by rest and without surgical intervention. Absence of visible injury to the abdominal wall prompts me to present another case seen two years ago. A man 22 years old was pitching to a threshing machine and accidentally stuck his fork tine into the drive belt, punching the end of the fork handle against the lower abdomen with considerable force. He left the machine, got into his car and drove to town and went to bed, and in the course of two hours called me to see him. There were no signs of visible injury and the patient did not seem to be in shock, and after having consultation we decided to watch for further developments. Eighteen hours later the patient began to show signs of peritonitis and we opened up the abdomen to find a normal abdominal wall free from any signs of in-

jury but with two holes torn in the ileum and a large amount of intestinal contents out in the abdomen. The boy died of peritonitis although the gut was repaired and drainage inserted. Had a laparotomy been done immediately, this patient's life might have been saved.

#### LOCALIZED RIGIDITY

One sign that I have found of real value and one in which I place a good deal of reliance, is localized rigidity. If the patient has a ruptured viscus, one is very likely to have overlying the lesion an abdominal rigidity which corresponds to the injured viscus. And one peculiarity of it is that if you give the patient morphine the rigid muscle will not relax. This I feel is a very valuable sign and one to which we should attach considerable importance as indicating a ruptured viscus.

#### EXPLORATORY LAPAROTOMY

If you cannot make up your mind as to whether or not there exists an intra-abdominal injury, if the history is such that there is a probability of an injury to the viscera; then in spite of the slight sign of injury to wall and the slight general symptoms, slight change of pulse, no signs of hemorrhage, etc.—in case of doubt it is better to do an exploratory laparotomy than to take the chance of overlooking a ruptured viscus for 24 hours or more, thus making your diagnosis before the inception of spreading peritonitis. An exploratory laparotomy is not a very serious procedure, whereas to allow a rupture of the stomach or bowel to remain for 24 hours is very serious and likely to cause loss of life. Whenever I have a case of this sort I feel as though I had never seen such a case before, that this is the first, and treat it accordingly.

One does not like to do an operation even though it is not a serious one without being first convinced that it is necessary. On the other hand if we do not do a laparotomy we are conscious of the fact that we may be sacrificing a patient's life. Occasionally one will do an unnecessary operation. The following case of injury is one in which when you know the mechanism of its production you will justify me in doing an exploratory laparotomy. A man came in with



the history of being kicked in the right lower quadrant of the abdomen by a mule. We all admit the mule's reputation for producing violence. He stated that he was literally kicked clear across the stable and up against the wall. Yet upon exploratory laparotomy no internal damage was done. The man made an uneventful recovery. Another case, a man 50 years old, was kicked in the left lower quadrant by a six-week-old mule colt. The man was not knocked down. This man was seen by a very competent physician who could make out no signs of intestinal injury, yet ten days later when I saw this man he had a general peritonitis. Dr. Hall, of Hutchinson, and I opened up this man only to find in the descending colon a traumatised area which had perforated. I feel that here again is a case that did not show justification for a laparotomy, yet without doubt, early operation would have saved this man's life.

Another illustration of an injury with little signs of external injury, yet having a severe intra-abdominal injury, is a case that I saw with Dr. C. F. Price of Coats, Kansas. This man was drilling wheat and standing up in the back of the drill, flies were bad, the team stopped to kick at flies and he lost his balance and fell forward across the lever of a superior wheat drill. Except for a little red streak on the skin, the abdomen showed nothing. But he complained of a great deal of pain and had a local rigidity of the muscles in the epigastrium. We moved this man to the hospital and opened the abdomen and on first inspection could find nothing of importance.

About the time we were about to give up the search, we noticed a little gas coming up from the region of the jejunum. We then discovered that he had a rent in the jejunum at about the duodenal junction. Recovery took place after a stormy time, as drainage was necessary. This case emphasizes a point that I feel is quite important. The junction of the duodenum and jejunum is a favored place for injury due to the fact that the gut is fixed at this point. Trouble is more apt to occur here at this location than at any other part of the small bowel, as the other loops are more

mobile and less apt to be torn by external violence. Sometimes trauma occurs to the kidney in which case one is greatly aided by the finding of blood in the urine. Dr. Bernstorf of my city had a patient not long ago, who slipped from a ladder and struck her back upon a chair. Exploratory laparotomy showed a kidney completely torn across the horizontal diameter. Prompt removal of the kidney was followed by recovery. The cystoscope is of considerable value in this type of injury. Another case of kidney injury seen by me was that of a young man kicked in the loin by a horse. This boy soon showed all the signs of hemorrhage together with a copious amount of blood in the urine. The boy was put to bed and not operated and made a good recovery, although he passed blood in the urine for three weeks. This boy undoubtedly had a rupture of the kidney. I feel that the spine is an important factor in kidney injury as the kidney is forcibly thrust against it as a resisting object.

In conclusion I think you will experience more satisfaction in handling these cases and witness a greater percentage of recovery if you adopt the conclusion I have arrived at, that is: In case of doubt, where the history is such as to justify the probability of injury to the abdominal viscera, especially in the presence of a localized muscular rigidity, and with no signs of injury to the abdominal wall, with very little pulse change, little or no signs of hemorrhage, an immediate exploratory operation is advisable, without waiting for signs of peritonitis to develop.

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### **The Care of the Aged**

J. F. BREWER, M.D., Minneapolis

Paper read before the Kansas State Medical Society at Hutchinson, Kansas, May 4, 1927.

I started out to gather the grandest flowers and most beautiful foliage to deck my lady's bower. Not the common everyday posies that bloom along our pathway, but I sought the woodland where the most beautiful asters grow; the dell where the golden rod blooms in its color and profusion; and the purling brook along whose shady banks, the most delicate ferns can be found—choosing

only the grandest and most stately for such a high office.

On my return I discovered the daisies crushed beneath my feet; the violets drooping and faded, where in my eagerness I had broken them down; the delicate sensitive rose tangled and dying from its rough usage in my hasty search. Stooping, I tenderly gathered the violets, bruised but fragrant; the bloom of the daisy, pure as the snow from heaven, or blue as the autumn sky; and wove them with their more stately sisters, so that in viewing them afterwards I could not determine which was more lovely, the stateliness of the one, or the humility of the other—each adding a grace and beauty, so that all were necessary to completeness.

So in our search after great scientific truths in medicine and surgery, we are prone to brush aside many of the little amenities of life that are the cornerstone of our success in handling our patients, especially the decrepit old. Time presses us, years advance, and the snows of many winters whiten our hair, but this does not constitute age, which is distinctly an attitude of the mind. And it is the province of an aged person's medical adviser to become his counsellor and teacher, so directing his mental and psychological attitude as to reduce the sting of dotage to a minimum. A man who thinks he is old is afflicted with what our psycho-analytical friends designate as a complex, and generally believes that he must present a certain amount of bravado that he does not feel, to show the world that he is still in the ring.

Should one of this description (and "His name is Legion") meet an M.D. specialist who is also possessed of a complex (and "His name is Legion") the effect is absolutely opposite the result desired. What these patients require is a simple straightforward friendly heart to heart talk and not the common austere, ultrascientific explanation that they frequently receive. We know, and they know, that their powers are failing, and that assurance is one of the greatest assets in the care of them. Science in its perfection (a point by no means attained at present) will fail to compass the full scope of applied practice of medicine.

And so long as we adhere to strictly physical and laboratory diagnosis, and forget the importance of studying the individual psychology of each patient, the Eddyite will flourish on cures founded on his belief. The chiropractic will continue to adjust organs of the body of which he is absolutely ignorant, and the osteopath will go on reducing imaginary dislocations. This observation is more true of the aged than in all other branches of medicine combined.

Mr. B., aged 76, consulted me as to his circulation. He said he had a fluttering in his chest. He had a complex. He had some money and wanted it understood that he was willing to spend it, especially where his health was in the balance. I directed him to a specialist. When he returned he came to my office, and I asked him as to the result of his consultation. He replied:

"Dr., I am sorry I consulted him. I undertook to give a description of my sensations, which he dismissed with a wave of his hand. He informed me that it was not necessary for him to go through that silly routine that ignorant country practitioners used but that he would give me the proper kind of an examination. He did give me what I believed to be a thorough physical examination; then asked a few questions, that was an inquisition with the pomp of a Caesar; then gave me his diagnosis and prognosis much as I would imagine a judge would pronounce sentence on a man whom he had determined to be guilty. And Doctor, I came away feeling like a condemned criminal. I didn't think I had long to live, but he knocked the last prop from under me."

I assured him that no man, however skillful, could cast a horoscope of one's life, and also that his condition presented no immediate danger. Taught him something about the sounds of the heart, and required him to listen to his own heart. I told him frankly that I sent him to a specialist, not because he needed it, but because he wanted to go, which he admitted. He believed, or seemed to believe what I said, but it took me three months to restore his psychic balance. Five years have passed and he is a hale, hearty, old man.



One more case in point. Mrs. H., aged 73, who had been treated by all of them—osteopaths, chiropractors, specialists, the house doctor, and all—consulted me as to her thousand and one ailments that no one understood. She began detailing her symptoms and I settled down, with pencil and notebook, for a two-hour seance. She talked just two hours. When she had finished and I had made a physical examination I told her I could relieve her, and she said:

"Dr., I know you can. The doctors talked of long periods of rest; the others of adjustments and misplacements, but you are the first to listen to all my symptoms."

I gave her some simple remedy that any doctor would prescribe and told her she would soon obtain relief. She had suffered the tortures of the d—d. The condition was principally psychical and she was cured when she found a sympathetic listener to her tale of woe.

In dealing with these aged people, I believe our profession has studied their condition rather than their needs. Hundreds of volumes are written on the care and treatment of children; millions of dollars are spent in research work; but in about forty years of hard work as a country practitioner, I have the first article to discover, telling me how to manage one—conscious of having been a person of strength and influence, has felt that strength decay, the influence vanish—who is groping for support and waiting the last roll call.

Whatever financial disadvantage may be derived from extra time and care of these aged people, I am very sure that no class of the work of our noble profession affords greater satisfaction than that of leading our old friends peacefully down to their last rest. I do not know whether I make myself plain, but I am trying to impress the fact that in undertaking to be ultra scientific we often miss the big things of life that should come to the experience of every man who practices medicine in any of its ramifications; miss the opportunity to study into senile psychology and exercise our gifts in correcting the vagaries of a brain weakened by senile decay, and years of disillusionment; and

to fully realize that these people are entitled not only to the best we can give but that the aged whose sands are running low, more than any other class of people, appreciate attention. I consider the physician's greatest asset an innate love for the weak and helpless, a desire not only to afford the best scientific treatment but to make the patient feel that he is dealing with a sincere friend.

#### THE LAST LEAF

"I saw him once before,  
As he passed by the door,  
And again  
The pavement stones resound,  
As he totters o'er the ground  
With his cane.

"They say that in his prime,  
Ere the pruning knife of time  
Cut him down,  
Not a better man was found  
By the crier on his round  
Through the town.

"But now he walks the streets,  
And he looks at all he meets  
Sad and wan,  
And he shakes his feeble head,  
That it seems as if he said,  
'They are gone.'

"The mossy marbles rest  
On the lips that he has prest  
In their bloom,  
And the names he loved to hear  
Have been carved for many a year  
On the tomb.

"My Grandmamma has said—  
Poor old lady she is dead  
Long ago—  
That he had a Roman nose,  
And his cheek was like a rose  
In the snow;

"But now his nose is thin,  
And it rests upon his chin  
Like a staff,  
And a crook is in his back,  
And a melancholy crack  
In his laugh.

"I know it is a sin  
For me to sit and grin  
At him here;  
But the old three-cornered hat,  
And the breeches, and all that,  
Are so queer!

"And if I should live to be  
The last leaf upon the tree  
In the Spring,  
Let them smile, as I do now,  
At the old forsaken Bough  
Where I cling."

—R—

"Pa, did you go to Sunday School when you was a boy?"

"Yes, my son, I always went to Sunday School."

"Well, Dad, I think I'll quit going. It ain't doing me any good either."

**Malpractice****J. D. M. HAMILTON, Topeka**Attorney for the Defense Board of the Kansas  
Medical SocietyAddress at Annual Meeting Kansas State Bar Association,  
Wichita, October 10, 1927.

It is rather hard in going over the scope of the law of malpractice to find any particular phase which would present to a group of lawyers an interesting subject from an academic standpoint. On the whole the rules of malpractice have been built up in such a way as to afford a substantial protection to the medical man from civil liability. Not only has he had the benefit of these rules which our courts of law have established but he has the practical benefit of ordinarily having the full co-operation of his colleagues in the same profession. I presume that in this group there is not a man who is not familiar with the basic principle of liability in malpractice cases. It is probably best stated in the query which comes at the end of the usual hypothetical question. "Assuming the above facts to be true, have you an opinion as to whether or not the treatment given by the physician mentioned constitutes approved, proper and skillful practice in Podunk, Kansas, or similar communities." There have, however, developed certain refinements of this general rule which, together with the unusual strides made by the medical profession, particularly in the great clinical centers, have developed a situation which places the ordinary general practitioner in a most unusual situation.

I should say at the outset that in discussing the matters which I am about to take up that I desire to preclude the specialist and necessarily the rule with regard to the specialist's liability. I do this because I am quite sure that if we were to analyze the great wealth of reported malpractice cases we should find that a large majority of them were brought against the general practitioner not the specialist and moreover, the general practitioner in the small or rural community. As specialism has developed over a large field of medical practice, it has necessarily created a higher plane of treatment in each particular field and the specialist himself has developed a much higher degree of skill

and proficiency than the average doctor can ever hope to obtain. As this situation increases, as it surely will, the position of the general practitioners becomes more and more difficult, not only as a matter of law but as a matter of fact, for it tends to have a very practical bearing upon their livelihood.

Let me take an example of what I have in mind both as to the practical operation and as to the legal phase which has been created by this great day of specialists.

Diabetes is a most commonplace affliction. It has for years been easily diagnosed and has in many instances been successfully treated, except in those cases which are characterized as acute, by a standardized diet. However, within the last few years there suddenly comes two Canadian physicians working in the research laboratories of McGill University and find a remedy which is nearly specific in its results and unselfishly they gave it to the world and to the medical profession generally under the name of Insulin. Its discovery was at once heralded in newspaper dispatches and by magazine comment and it is known generally among the laymen and particularly to diabetics but it is an accepted fact that Insulin must be used with unusual care and skill which must come either through experience gained either by use of the drug in clinical practice under the supervision of one who is proficient in its use or by experience gained through actual practice. Unfortunately the general practitioner will not have such a widespread experience in the use of this drug that he may gain his experience along the latter line. Certainly it will also be conceded that he can not rush away to some distant clinical center in every instance where some new panacea is discovered and if he attempts to gain proficiency by the actual experience of which I have just mentioned, he is very apt to find out that the first cases from which he hopes to gain his knowledge of the proper use are to be the basis of a malpractice suit. May he use Insulin taking his directions from the meagre articles that have been written or from the pamphlet which accompanies the sale of the drug? From a humani-



tarian standpoint the answer is probably an easy one. "Consult the specialist." From a practical standpoint it is quite a little more involved in that he must consider the question of his patient's ability to seek that service, also his own loss of prestige, not to say anything of his loss of business but you may say that these latter are gross, material reasons which can not be considered when human life is at stake and I would readily agree if it were not for the fact that in this day of specialists the Insulin illustration is but one of a thousand examples. There is no field of medicine today that is not the subject of the specialist. The local doctor is confronted with a confinement that gives evidence that it will be a breech birth and there are obstetricians in Kansas City, St. Louis and Buffalo who are particularly adept in deliveries of this character. He has a comminuted fracture and there are specialists in New York, Chicago and Cleveland who work solely along that line. He has a bad case of infected tonsils but he must consider the fact that Dr. Smith of Kansas City or of Topeka is a throat specialist. Now if we invoke the general rule of malpractice and assume that this local man is as proficient in any of these matters as the other physicians in his community, he is at liberty and safe to go ahead with any of these matters and if he exercises that degree of skill which is generally used by physicians of his community, he is protected as a matter of law, but as we have said at the outset, this general rule is qualified and it has some refinements that increase his difficulties materially from the standpoint of a potential liability for malpractice. In the first place, it is established that he may not try any experiments. Now that was originally a salutary rule of law and in its early interpretation I take it from the language of the various courts that the rule meant just what it said, that no doctor can conduct a medical research laboratory in the innards of his patients. That he can not try a new and unproven theory of treatment even though his intentions might be of the best. That he can not pit his own judgment with regard to a new departure against the judgment of the medical profession gen-

erally and so I say that if the normal interpretation is given of this rule, there could be no complaint on anyone's part but the Courts have in several instances broken away from this original meaning.

In the case of *Allen vs. Voge* the Supreme Court of Wisconsin approved an instruction "that a departure from approved methods in general use will render the defendant liable however good his intentions," and then added the statement for good measure that such procedure was justified only when the patient was *in extremis* and when the generally recognized methods had failed to secure results.

The Supreme Court of Washington has also held to the same end and in the case of *Sawdey vs. Railroad Company*, there being testimony that the procedure used by the defendant was recognized in Chicago, Vienna and Cincinnati by specialists and also testimony that it was not the usual procedure employed, let the jury determine as a question of fact whether the procedure was experimental. It is interesting to note that in this case there was no testimony on the part of any doctor that the procedure adopted by the defendant was negligent but only the testimony of the plaintiff's medical witnesses that it had not been adopted generally, the ultimate result being that there was submitted to the jury for determination the technical question as to whether or not an undisputed method of procedure recognized by specialists in at least three great clinical centers was a better method than that used in the general practice where the defendant carried on his profession. In other words, the doctor who reads or perchance attended these clinics was told to wait until those who had less initiative could catch up—a penalty for being progressive.

In connection with this case it is also submitted that the effect of the ruling of the Court is a direct violation of the established rule that where there are two recognized methods of procedure there is no basis of liability in the mere adoption of one to the exclusion of the other. I call attention to these cases to show that with the continual advance of medical service there is a positive danger to the progressive practitioner. If he goes

ahead he may run afoul of the experiment rule. And as anomalous as it may seem if he stays in the van he is no better off for another line of decisions have adopted a rule of law based upon the theory that today, with the great advantages which are offered to doctors, he must remain abreast with the progress of medicine. In *Pike vs. Honsinger*, the Court of Appeals of New York said "A surgeon is bound to keep abreast of the times and a departure from approved methods in general use will render him liable, however good his intentions may have been." What does it mean when it is said that he must keep abreast of the times? Does it simply imply that he is bound to the old rule of keeping abreast of those with whom he practices or does it mean that he is charged with keeping up with medical science as it goes forward. How can he keep abreast of the times and not depart from general methods?

An interesting case is that of *Sauers vs. Smits* reported by the Supreme Court of Washington. The plaintiff had been severely burned by *x-ray* which had been used therapeutically. The defense was based upon the theory that the *x-ray* was a new agency in medical practice and that the defendant was as proficient in its use as any one in his community and that he was entitled to be adjudged by that standard. The case was reversed for reasons of no interest in this discussion but in commenting upon the testimony which I have just noted, the Court dismissed it as a defense with the terse statement that one who had as little knowledge as the defendant of the use of the *x-ray* was guilty of negligence as a matter of law. Thus we see that the doctor can not in all cases rely upon the standard of his local colleagues as a defense. So I take it that if a local practitioner does attempt to keep abreast of the times, the standard of care and proficiency which he must employ is not that of those with whom he practices but is based upon the skill of that group of physicians and surgeons who are generally engaged in the use of the particular agency or procedure which he has attempted to employ. The danger to the

general practitioner from this theory is quite apparent.

I do not want to be placed in the position here of contending for any rule or doctrine of law which would allow a physician to shoot above his head, but I do submit that if he can not do that, neither can he be required to meet the "abreast of the times" doctrine, in the sense in which it has been applied.

It is always easy to criticize and hard to suggest a rule which is fair to both the plaintiff and defendant in malpractice cases, but I am convinced that in this day and age, when medicine is advancing with such rapid strides, the doctor must be allowed a reasonable latitude in advancing with it. I would suggest, therefore, that he should be permitted to accept the alternative of attempting to keep abreast of the times provided, of course, that if he does so elect he shall be judged by the average surgeon or physician employing the same agency, or that recognizing his own limitations he may be free to fall back upon the basic rule of malpractice and accept the commonplace and general procedure and be judged by the standards of those with whom he practices.

There is one other group of cases which I desire to discuss briefly, and I shall have finished, that is the group having to do with burns received from the use of *x-ray*. We have had one instance in our own Supreme Court in the case of *George vs. Shannon* which was decided in July, 1914. In the trial below the Court instructed, "If you believe from the evidence in this case that it is proper for the purpose of diagnosis for a physician to use an *x-ray* machine for the purpose of taking pictures and that when proper instrumentalities and proper care are used, the burning of a patient is not a necessary result of the taking of said *x-ray* pictures, then the fact that the patient was severely burned while such pictures were being taken is a circumstance that may be taken into consideration in determining the question of the physician's skill and carelessness. . . ." This instruction was cited as error by the defendant but was approved upon the appeal. It is to be noted at the outset that this instruction



transgresses at least to some extent the established rule that results are not evidence of negligence and it is susceptible of the interpretation that in cases of burns received in the taking of pictures the doctrine of *res ipsa loquitur* may be invoked by the plaintiff. At least such is the conclusion of certain text writers.

Roentgenology is professionally divided into three general classes, roentgenograph being the *x*-ray picture, fluoroscopy being the inspection of the body under a fluoroscope and roentgenotherapy being the therapeutical use of the generated rays. That these different uses might create different legal aspects was recognized in the first *x*-ray case reported in the United States, that of Henslin vs. Wheaton, a Minnesota case decided in January, 1904. The defendant used the *x*-ray to locate a foreign body in the lungs and a burn resulted. In the plaintiff's case testimony was offered of a physicist who had used the *x*-ray for lectures as a college instructor to prove that the machine was negligently used. The testimony was refused upon objection on the ground that the witness was not a physician or surgeon. The Supreme Court reversed the case holding that in view of the use made of the machine the testimony of anyone conversant with the *x*-ray machine generally would be proper in such a case but the Court also indicated that if the machine had been used therapeutically the defendant's objection would have been a proper one.

The next case in point of time is Shockley vs. Tincher decided in the Supreme Court of Iowa in May, 1905. The doctrine of *res ipsa loquitur* was adopted even though the *x*-ray machine was used for the treatment of disease. Since the decision of those two cases there has been developed a wealth of authority and these cases may all be divided roughly into three classes. First, those cases holding that an *x*-ray burn is in and of itself sufficient to invoke the doctrine of *res ipsa loquitur* no matter how the machine was being used, and, secondly, those cases which are exactly contra in that they hold that the doctrine of *res ipsa loquitur* can never be applied to an action for *x*-ray burns and, finally, that

group of decisions which differentiate between the use of the machine for the taking of the pictures and for therapeutical purposes, invoking the doctrine in the first instance and refusing it in the second.

I do not want to take your time discussing what is or what is not a proper academic statement of *res ipsa loquitur*. Professor Bohlen of Harvard, who has been employed to write the restatement of the law of torts for the American Law Institute, states that the doctrine of *res ipsa loquitur* applies where the information and control of the agency causing the casualty is shown to be under the control of the defendant and that the casualty will not happen in the ordinary course of events if due care is exercised by the defendant. We can not apply this rule of law to *x*-ray cases on the simple ground that the defendant has sole control of the machine and thus the plaintiff is not in position to obtain affirmative testimony of negligence. If this were the test, it would apply equally as well to every operation done under a general anesthetic. It seems to me the true test is found in the answer to the question, "Could this burn have been occasioned if the defendant used the standard machine with due care considering the purpose for which its use was employed?" If the answer is no, then the doctrine can be fairly invoked. If it is yes, there is no place for it and this is so irrespective of the difficulty which may confront the plaintiff in obtaining the necessary evidence of negligence. But the question can not be answered as a pure matter of law and to find the proper solution we must look to the scientific side of the case. The mechanical use of the *x*-ray involves five distinct and independent factors. First, the distance between the generating tube and the body of the patient. Second, the voltage or spark gap which is used. Third, the miliamperage or current which is allowed to flow through the tube. Fourth, the time of exposure. Fifth, the filterage. With the exception of the fifth, all of these factors are present in every instance where the *x*-ray is used and this is so irrespective of the purpose to which it is put. It must be

admitted that the time of exposure and the target distance are subject to the sole control of the operator but through mechanical deterioration of the amplifier over which he had no control and which is not necessarily discernable, the voltage may suddenly be increased. It is also a mechanical fact that the tube through which the rays are generated become what is known as "soft" or "hard" and these qualities affect the penetrability of the rays and their power of doing damage. It has also been undeniably demonstrated that some people burn easier than others. It has been ascertained that fine skin is more susceptible than coarse. That those who have anemia are not so susceptible as those with a good circulation. That sex and age are factors to be considered. Except for the purpose of illustrating the fact that burns come from sources other than the mere operation of the machine, these matters are of no legal import as they may all be determined by the operator and he must consider them in adopting his formula, but there are people who, for no known reason, are particularly susceptible to the *x*-ray, who will burn on the slightest exposure no matter how carefully it may be administered. Just as one man will become afflicted with poison ivy by coming in slightest contact with the plant while another is not subject to its poison no matter how much he may be exposed. The medical man can not explain this in the one instance any more than he can in the other. He must content himself with calling it an idiosyncrasy of the particular individual. These are all scientific facts not to be disputed and it would seem to me it certainly can be fairly said that the answer to the question put is "yes" and if such is the case, there is no place for the application of the doctrine of *res ipsa loquitur* in the consideration of cases arising because of *x*-ray burns.

It is unfortunate that between the two leading professions there should be any feeling of one against another but it is certainly true that many doctors have a feeling that the lawyer is out for the money and that he will take a malpractice case upon a gamble, irrespective of

the merits involved. Contrary to the views of some people, malpractice is growing continually. The reports of the Kansas State Medical Society show a substantial increase from year to year. The largest insurer of doctors has been compelled to withdraw from Missouri and Oklahoma and even now have before them the question of withdrawing protection from doctors of the State of Kansas. I do not believe that it is a lawyer's duty to protect a negligent and careless doctor and I am quite fully convinced that there are many cases of carelessness on the part of practicing physicians where the patient not only has a legal action but it is only just and fair that he should be entitled to some recompense for the damage which he has suffered. On the other hand, I think it is the duty of every attorney in scrutinizing malpractice cases which are submitted to him, to consider the doctor's difficulty and particularly the situation of the general practitioner in the smaller communities.

As I go over the many cases of malpractice which are submitted to our office, I often have occasion to think what a Godsend it is to many of my own profession that there is not still a third profession which obtains a pecuniary return in checking up the proficiency and skill employed by lawyers in the handling of their own business.

—————R—————

### KANSAS MEDICAL LABORATORY ASSOCIATION

#### Finger Prints as an Addition to Laboratory Work

LANCE C. HILL, Emporia, Kansas.

Since I am of the opinion that fingerprinting and finger print identification belongs to the clinical laboratory in communities the size of that I serve, I desire to make a few remarks pertaining to the use of this test in the clinical laboratory.

The reputable and ethical clinical laboratory has become well established, and has won a permanent place in the community and has become an economic necessity. The laboratory is founded on a real service, filling a place that has not heretofore been filled or only partly



filled and that part inadequately, since the laboratory was often in a city too far distant to be of any practical value either in immediate diagnosis of certain diseases or in the way of causing unnecessary expense to patients in travel and accommodations. What I have just said about the clinical laboratory is true of finger prints in a slightly different way. The community usually stands the added expense to import a finger print expert and in some cases the private individual when he has occasion to engage such services.

Unfortunately most of the publicity which has been given to the science of finger print identification has dealt with its relation to criminal investigation. This phase of the science was no doubt first used and because of the sensational nature of crime has been widely published and read by the public. Few people are aware of the fact that the use of finger print records are being used extensively by the banking institutions and bonding companies. Many banks are now paying checks of illiterates on finger prints, used in place of the signature and X method. Some banks are finger printing all their employees. The use of finger prints spreads into all branches of commerce where personality is a part of important transactions.

The Army, Navy and Marine forces of the United States have long seen the infallibility of the finger print system and have used it not alone for the apprehension of deserters and murderers in their ranks but for identifying the unknown dead, paying of claims and many other transactions where positive identification is necessary. Some hospitals are using finger prints for the registration of infants.

Let us take the following example to show one way in which we may use finger prints in a business way. If an individual wished to have his lawyer, banker or some other person recognized in a foreign country or a distant city, that individual's finger prints could be forwarded by mail to the person with whom he was to transact the business and upon the arrival of the representative finger prints could be made, thus

making the identification complete. The time is coming when the law will require the registration of finger prints with the birth certificate. Much good could come from such a law, identification of heirs, returning of runaway children, apprehending those who became criminals and affording protection to those who need it.

In communities the size of that I serve there is room for an individual who can do finger print work, but it must be remembered that the demand does not justify the setting up of this business alone. It must be done in connection with another business and it is for this reason, principally that I believe the clinical laboratory man should take up finger prints. It has not interfered with my laboratory work and has been somewhat profitable.

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B

### TUUBERCULOSIS ABSTRACTS

#### Tuberculosis in Infants

Asserson studied the histories of 5,659 infants under two years of age in hospitals, clinics and baby health stations of New York City. The 336 infants in this group who had tuberculosis and whom it was possible to trace for a period of five years, were divided into two groups: (1) those from "contact" families, that is, families where there was a case of active tuberculosis; and (2) those from "non-contact" families. Of the tuberculous infants from contact families 47 per cent are known to have died of tuberculosis, while of the tuberculous infants from non-contact families only 12 per cent died of tuberculosis. In other words, the chances of a fatal outcome for infants which have tuberculosis in contact families are about four times greater than for those in non-contact families.

To advocate the removal of infants or young children from their home environment, says Asserson, is contrary to all human sentiment and desire. The appeal should rather be made for the removing of the member of the family whose presence is a serious menace to the life of the baby in its midst.—*Tuberculosis in Infants*, M. Alice Asserman, *Amer. Rev. of Tuberc.*, Oct., 1927.

### Latent Tuberculosis in Children

Opie defines latent tuberculosis as tuberculosis unaccompanied by significant symptoms or physical signs. It is recognizable by the tuberculin test and by roentgenological examination and after death by characteristic tuberculous lesions. In many cases it is a trivial infection, but in others it is a source of clinically manifest disease. Within certain limitations latent infection can be recognized and its intensity measured.

The infection may continue to progress by way of the lymphatics, and later by the blood stream, when general dissemination may lead to tuberculous meningitis and death. In early infancy general dissemination most frequently occurs, but there is more resistance during the second half of the first year. With increasing frequency, as age progresses, tuberculosis is arrested within the nearest lymph nodes, encapsulation occurs, and finally the caseous center of the lesion undergoes calcification. During the period of uncertain balance between extension of the infection and recovery, environmental conditions may decide in one direction or the other. Herein lies the gravity of latent tuberculosis, including as it does, active anatomically progressive lesions with the potentiality of fatal disease on the one hand, and on the other, healing or healed lesions, which have passed the period of danger.

Distinction must be made between tuberculosis of children and of adult life. The outstanding feature of tuberculosis of infancy and early childhood is the spread of the infection from a primary focus in the parenchyma of the lung to adjacent tracheobronchial lymph nodes. There is no evidence that the first infection is at the hilum of the lung. The typical tuberculosis of adults has two outstanding characters; namely, localization and chronicity. It is limited to the lungs, and in many instances never extends below the apex, while the lymph nodes at the hilum are not significantly implicated.

Opie disputes the belief that the apical lesion of adults is derived from the focal lesion of childhood. But the adult type of pulmonary tuberculosis is not uncom-

mon in the second decade of life, in which sense the disease of adults may have its origin in the later period of childhood.—*Latent Tuberculosis in Children*, Eugene L. Opie, *Amer. Rev. of Tuberc.*, October, 1927.

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### Childhood and Adult Types of Tuberculosis

Webb, discussing the relationship of tuberculosis to public health, quotes Bushnell's arguments that pulmonary tuberculosis always results from endogenous reinfection (extension of tuberculosis from a previous tuberculous lesion) which is contrary to Opie's conviction that the adult type of pulmonary tuberculosis is exogenous (reinfection from without) in origin. If Opie's position is correct, says Webb, we must accept an idea which is foreign to all our knowledge of parasitology. There is no parasite known to us which needs to attack twice at intervals of ten to twenty years to achieve its life history.—*Tuberculosis and Its Relation to the Public Health*, General B. Webb, *Journal of the Outdoor Life*, Nov., 1927.

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### Nutrition and Childhood Tuberculosis

On the basis of a tuberculosis survey of children of three Philadelphia public schools, Hetherington concludes that there are two means by which the existence of latent tuberculosis in children can be clearly shown; (1) a positive tuberculin reaction (intracutaneous) which indicates infection with tubercle bacilli, and (2) roentgenological evidence of caseous or calcified nodules of lungs or tracheo-bronchial lymph nodes. Clinical symptoms, such as those of upper respiratory infection and physical signs, including D'Espine's sign, fever and malnutrition, are uncertain guides, unless such evidence is supported and confirmed by positive skin tests and x-ray findings.

Children with latent tuberculosis were studied, particularly with regard to malnutrition. Little if any relationship was found between underweight and latent tuberculous infection or latent tuberculous nodules of the lungs. A small group of cases indicates that latent apical tu-



berculosis of adolescence in some instances causes moderate loss of weight. Underweight of itself has little if any value in the diagnosis of latent tuberculous infection.—*Malnutrition in Childhood and Tuberculous Infection*, H. W. Hetherington, *Amer. Rev. of Tuberc.*, Oct., 1927.

### Septic Infections of the Lungs

Septic infections of the lungs and bronchi are often mistakenly diagnosed as tuberculosis. Their course is very



(Courtesy D. A. Stewart).

Bronchiectatic cavities revealed by x-ray and iodized oil. Patient, age 27, was weak and miserable and weighed 80 pounds. Condition dates back to age 5.

variable, but they are usually progressive, chronic, damaging, debilitating, distressing and, not infrequently, fatal. Bronchiectasis is not an uncommon condition. These infections are characterized by chronic cough; expectoration profuse and foul smelling in the late stages; dyspnea; pain in the chest and, after the disease is well established, weakness and loss of weight. Pleurisy is less common. The lesion is usually basal (in contrast to tuberculosis, in which early lesion is generally apical).

The most troublesome of them can be traced back, sometimes many years, to pertussis, influenza or broncho-pneumonia, or to sinus infections, tonsilitis or bronchitis. Perhaps broncho-pneumonia is the essential factor. Bad teeth, tonsils and mouth conditions generally are fairly constant factors, likely causal. Certain spirochetes and fusiform bacilli found in the mouth seem to be among the specific causes.

Bronchiectatic cavities are not well shown by the ordinary x-ray plate, but iodized oil, placed in the trachea, coats the walls of cavities, if emptied of secretions, and brings the outlines out sharply.

Rest in bed and drainage by posture or perhaps by the bronchoscope are useful in the early stages. Since spirochetes are implicated, neo-salvarsan has been used and successes reported. For the intermediate stage, collapse of the lung by pneumo-thorax, phrenicotomy or thoracoplasty should be considered. The late stages call for desperate treatment, such as destruction of the diseased lobe by cautery.—*Septic Infections of Lungs and Bronchi*, David A. Stewart, *Can. Med. Assn., Jour.*, 1927, XVII.

R

### UNIVERSITY OF KANSAS CLINICS

#### The Importance of the Leucocyte and Differential Count in Surgery

Clinic of Dr. Thomas G. Orr

Paper read by Student Anne Goldberg

Within the last half century, physicians, surgeons, and pathologists have realized more and more the value of the differential leucocyte count in surgical diseases. Before that time total counts only were made. This gave information of but little value since the total count is influenced by many non-pathological factors. There is, for instance, the leucocytosis of the newborn, the leucocytosis of digestion, the leucocytosis of pregnancy and parturition, the leucocytosis of strenuous exercise and massage, etc. These are all physiological phenomena; they may be very confusing in determining a pathological white blood cell increase such as is found in post-hemorrhagic conditions, in inflammatory or in toxic conditions, or in malignant diseases. But unlike the total white count, the differential count gives reliable and very valuable information in the diagnosis and prognosis of acute surgical diseases. The differential count is, as a rule little influenced by physiological conditions.

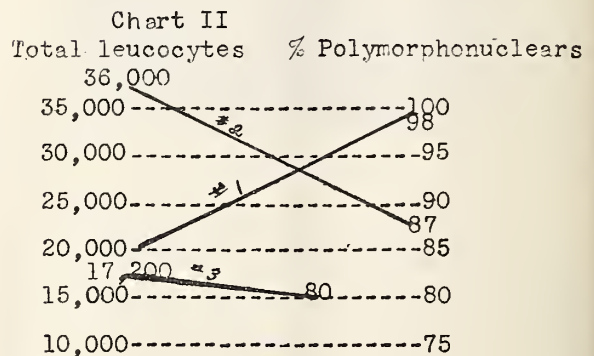
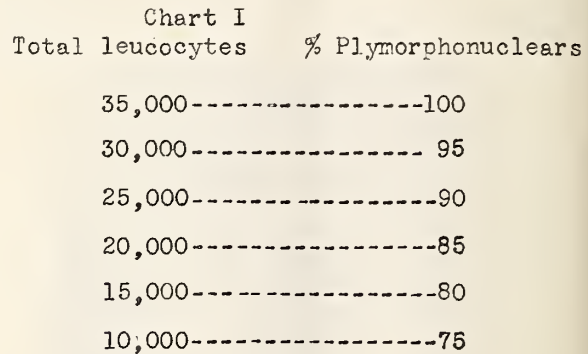
It is generally considered that a normal leucocyte count varies from 6,000 to 10,000 and that the normal percentage of polymorphonuclears is from 60 to 75

per cent. It is the polymorphonuclear cells which are principally affected in inflammatory diseases, and hence they, of all the white cells, are to be especially noted in the differential count. As a general rule, the total count is an index of the patient's resistance to the infecting organism; the polymorphonuclear count is an index of the severity of the infection. If there is, for instance, a polymorphonuclear count ranging from 75 per cent to 80 per cent, infection is probable; if this count is 80 per cent to 85 per cent, infection is usually found; that if the polymorphonuclear count is above 85 per cent, infection is almost invariably present. Dr. Herbert W. Hewett says: "In fact, some laboratory workers do not make use of the total count at all, but depend for diagnosis entirely upon the differential count." On the other hand, Dr. F. E. Sondern, who first conceived the idea that the degree of leucocytosis indicates the amount of body resistance and the percentage of polymorphonuclears the severity of the inflammatory process, thinks that the most important point, both in the diagnosis and prognosis of the disease, is the relationship between the total leucocyte count and the polymorphonuclear count.

Dr. C. L. Gibson of New York made clinical application of Sondern's ideas. Gibson's work is interesting as well as very valuable practically. Through his work we can readily see the great value of the differential leucocyte count in surgery. It is definitely known that when the polymorphonuclear count is below 60 per cent or above 75 per cent of the total white count which varies from 6,000 to 10,000 normally, a pathological condition exists. Dr. Gibson says: "Bodily resistance or lack of resistance is more clearly defined by such disproportion between the total and differential count than by any other means at our command; and of all methods of blood examination, this is the most valuable both from a standpoint of diagnosis and prognosis."

Taking 10,000 as the maximum normal leucocyte count and 75 per cent as the maximum normal polymorphonuclear count, Dr. Gibson, (applying Sondern's principles, as stated above) has devised

a "standard chart." On this chart he can readily show the relationship between the total leucocyte count and the differential count. The total count is placed on the left side of the chart and the percentage of polymorphonuclears on the right "with a rise of 1 per cent in polymorphonuclears of each increase of 1,000 white cells." Thus we have the following characteristic Gibson charts—(Chart I and Chart II.)



With a proportional increase between polymorphonuclears and total leucocytes, a horizontal line results, as shown in chart I. With any disproportion between the two counts, an oblique line results as seen in chart II, lines 1, 2 and 3. With a low total leucocyte count and a high percentage of polymorphonuclears, the result is, obviously, an oblique line rising toward the polymorphonuclear side of the chart. This is called a "plus disproportion." With a high total count and a low percentage of polymorphonuclears the resulting oblique line goes downward toward the polymorphonuclear side or a "minus disproportion." These three possible lines on the given chart II have each their definite meaning. A fairly well resisted infection will show a parallel line; a line rising toward the polymorphonuclear side means a



relatively poor body resistance with a severe inflammatory condition; and a line falling toward the polymorphonuclear side represents a proportionately good resistance with a less severe infection and relatively good prognosis. Lines 2 and 3 represent such conditions. In fact, line No. 2 represents a case of pelvic abscess. According to the chart reading, or interpretation, the obliquity of this line indicates a favorable condition for operation. The patient was operated upon and the result was "recovery with no unfavorable symptoms." Dr. Gibson states that all of his fatal cases showed a line rising toward the polymorphonuclear side. He made use of the total and differential white count and his chart in 705 cases of appendicitis. The data he obtained surely proves the fact that the relation between the total and differential leucocyte counts is of great value in the diagnosis and prognosis of this acute surgical disease.

It should be remembered that the total and differential leucocyte counts are valuable not only for their positive but also for their negative findings. Dr. Metcalf had a case which illustrates what I am now trying to explain. "A very large woman with thick abdominal walls was suddenly seized with pain over McBurney's point and vomited. Tension of muscles and tenderness were present in the right lower quadrant of the abdomen. The temperature and pulse were normal. Vaginal examination revealed nothing positive. A diagnosis of a small "ovarian cyst with a twisted pedicle" or acute "appendicitis" was made. The blood count revealed a total of 8,590 white blood cells with a differential of 62 per cent polymorphonuclears. After the differential count was known, a diagnosis of "ovarian cyst with twisted pedicle" seemed definite. Abdominal operation confirmed the diagnosis. It was the differential count, therefore, which made the correct diagnosis of this surgical case possible.

It is of value to remember that in acute inflammatory diseases in the pelvis the differential white counts are low—that is the polymorphonuclear counts are low. In the appendiceal region the

differential count is comparatively higher; and in the upper parts of the abdomen there is a marked increase in both the total and differential leucocyte counts. The following figures by Dr. Herbert W. Hewitt varify the above statements:

|                                           | Total Count | Polymorph Per Cent |
|-------------------------------------------|-------------|--------------------|
| Pelvic lymphatic infection.....           | 13,866      | 82.3               |
| Acute catarrhal appendicitis .....        | 17,907      | 83.0               |
| Pelvic abscess .....                      | 20,005      | 83.0               |
| Acute pyosalpinx .....                    | 14,636      | 83.3               |
| Appendiceal abscess (circumscribed) ..... | 19,039      | 85.75              |
| Appendiceal abscess (uncircumscribed) ..  | 18,175      | 86.4               |
| Puerperal sepsis .....                    | 16,315      | 86.9               |
| Stitch abscess .....                      | 21,733      | 87.6               |
| Gangrenous and perforative appendicitis.. | 19,516      | 89.1               |
| General peritonitis .....                 | 20,546      | 89.5               |
| Acute cholecystitis .....                 | 20,055      | 92.3               |

In using the total and differential leucocyte counts in surgery, it must be remembered also that sex, age, body temperature, pathological processes, and the type of infecting organism have each particular characteristics with reference to the leucocytes. The following figures show the influence of sex on the white blood cell count. They are taken from cases of acute appendicitis. They show, on the whole, that females have a slightly better resistance than males:

|         | Cases | Total w.b.c. count | Per cent polymorphonuclears | Disproportion |
|---------|-------|--------------------|-----------------------------|---------------|
| Males   | 192   | 17,407             | 84.9                        | plus 2.5      |
| Females | 117   | 16,378             | 83.7                        | plus 2.4      |

(The disproportion of plus 2.5 means that there are 1,000x2.5 more polymorphonuclears present than the number of polymorphonuclears to 17,407 (total count) on the Gibson chart.)

And the following series of numbers prove the general principle that the younger the individual the better the resistance. Here, likewise, the figures are taken from cases of acute appendicitis:

| Age         | No. of cases | Ave. W.B.C. | Ave. polys % | Dispro'tion |
|-------------|--------------|-------------|--------------|-------------|
| 0-9         | 25           | 19,604      | 85.9         | plus 1.3    |
| 10-19       | 113          | 18,298      | 85.5         | plus 1.2    |
| 20-29       | 76           | 16,631      | 84.5         | plus 2.9    |
| 30-39       | 48           | 15,303      | 84.8         | plus 4.5    |
| 40-49       | 29           | 13,659      | 83.5         | plus 4.9    |
| 50-59       | 13           | 15,115      | 84.7         | plus 4.6    |
| 60-and over | 5            | 10,266      | 83.0         | plus 7.8    |

Rise of body temperature is closely associated with a rise in leucocyte count and a relative increase in disproportion between the total and differential counts. Figures for such conditions have been published by Menninger and Heim.

They are:

| Temp.     | Cases | W.B.C. | Poly % | Disproportion |
|-----------|-------|--------|--------|---------------|
| 98-98.9   | 15    | 13,686 | 80.7   | plus 2.1      |
| 99-99.9   | 42    | 15,230 | 81.9   | plus 1.7      |
| 100-100.9 | 73    | 15,836 | 84.0   | plus 3.2      |
| 101-101.9 | 84    | 18,990 | 85.9   | plus 2.0      |
| 102-102.9 | 60    | 17,582 | 85.0   | plus 2.5      |

|              |    |        |      |           |
|--------------|----|--------|------|-----------|
| 103-103.9    | 20 | 16,585 | 87.2 | plus 5.5  |
| 104-104.9    | 13 | 17,300 | 88.5 | plus 6.2  |
| 105-and over | 2  | 17,000 | 92.5 | plus 10.5 |

It is interesting to note that different infectious organisms are associated with different and characteristic total and differential leucocyte counts. The following figures give a more definite idea of this observation:

| Organism                 | Cases | W.B.C. | Poly % | Dispro'tion |
|--------------------------|-------|--------|--------|-------------|
| B. Coli Communis.....    | 24    | 18,308 | 87.6   | plus 4.3    |
| B. Proteus .....         | 10    | 16,860 | 85.2   | plus 3.4    |
| Staphylococcus Aureus. 3 |       | 13,600 | 85.6   | plus 7.0    |
| B. Lactis aerogenes....  | 2     | 13,500 | 80.0   | plus 1.5    |

#### CONCLUSIONS

1. The total white cell count alone is of little value in diagnosis and prognosis in surgery.

2. The polymorphonuclear count alone is of doubtful value in diagnosis and prognosis in surgery.

3. The relation of the differential (polymorphonuclear) count to the total leucocyte count is of much value in both diagnosis and prognosis in acute surgical diseases.

4. Various phenomena, conditions, and organisms alter the total and in most cases the differential leucocyte counts and these factors should be remembered in using the total and differential counts for diagnosis and prognosis in acute surgical diseases.

Comments by Dr. Orr: In my experience it has been somewhat difficult to teach students and internes the value of doing both the total leucocyte count and the differential. If they do both counts as a result of hospital ruling they are apt to be done in a haphazard manner by making blood smears carelessly or counting too few cells when the differential is done. In order to obtain a differential count of any clinical worth more than 100 cells must be counted. Less than 200 cells should never be counted and the results will be proportionately more accurate if 300 to 500 cells are counted. Do not try to make diagnoses and prognoses from careless and inaccurate work. It is not fair to the patient or to the doctor responsible for the patient.

This paper contains the factors that are important for you to remember to make blood counts in surgery a real help. These factors are first, that the total white blood is an index of the patient's resistance to the infection, second, the percentage of polymorphonuclear leuco-

cytes is an indication of the severity of the infection and third, that the relationship between the two is of utmost importance in estimating the prognosis.

Early knowledge of the prognosis in any case is often of inestimable value in treatment. A foreknowledge of what may happen to a patient may prevent disaster. We should not look upon prognosis as the last judgment before a patient dies but should determine, if possible, what the outlook for the patient probably is as soon as he is examined.

I am not sure that we should entirely subscribe to Miss Goldberg's first two conclusions that the total white blood count alone and the polymorphonuclear count alone are of little or of doubtful value in diagnosis and prognosis in surgery. I would prefer to have either rather than have no leucocyte count, although the tale told by the blood study is only half told if either the total or differential count is neglected.

—R—

#### Industrial Month

April has been designated a "Industrial Month" by the Abbott Laboratories. During this period a survey of the principal industries in various sections of the country will be made to determine to what extent the following Abbott and D. R. L. items are being used in industrial medicine.

Butyn, for the removal of foreign substances from the eye.

Butesin Picrate Ointment, the pain relieving antiseptic dressing for burns.

Chlorazene, the simplified Dakin antiseptic for immediate application to wounds, cuts and bruises to prevent infection.

Metaphen, the powerful mercurial germicide with a phenol co-efficient of over 500; non-irritating, stainless and practically non-toxic.

Izal, a white emulsion used for disinfectant purposes. Phenol co-efficient 10, by U. S. Hygienic Laboratory method.

Dichloramine-T, Chlorcosane and Par-resined Lace-Mesh Dressing.

A special booklet, "The Industrial Medicine Chest," has been prepared by the Abbott Laboratories, North Chicago, Ill., for distribution to physicians interested in industrial medicine.



# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - Editor**

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### THE ANNUAL MEETING

The sixty-second annual meeting of the Kansas Medical Society will be held in Wichita May 8, 9 and 10. There will be a large attendance at this meeting. There is always a large attendance when the annual meeting is held in Wichita, and this year there will be an attractive program. Besides a full quota of papers by our own members there will be some distinguished guests whom every one will want to hear.

In some respects this will be one of the most important meetings in the history of the Society, for there is to be decided whether the policy of expansion adopted two years ago is to be continued, whether the members of the Society feel that the work that has been planned and already put under way merits their financial support. In other words the House of Delegates must decide whether the constitution shall be changed so as to permit the dues to be raised in order to meet the regular expenses of the Society and carry on the work authorized and inaugurated two years ago.

An excellent program has been prepared by the Secretary and a very attractive entertainment program has been prepared by the Committee on Arrangements, announcements of which appear in another part of this number of the Journal.

### STUDY BY PROXY

It has not been so very long ago that county medical societies featured, in their more or less regular monthly meetings, the work being done by their own members. Meetings were held for the purpose of exchanging experiences and reporting unusual cases. Papers were prepared, with considerable care, with reviews of, or extracts from, the literature covering the subject, with or without illustrative clinical reports, but presented in a manner to bring out general discussion from the members present. There are still a few county societies that conduct such meetings and at which some very excellent papers are presented. Some of them have been published in the Journal during the past year. A society that can carry out programs of this kind and keep up a good attendance is fortunate, but there are few of them.

The reports of county society meetings during the year show that more and more of them are depending upon foreign talent for their programs and find that some attraction of this kind is necessary to secure the attendance of their members.

From one point of view this may be regarded as a deplorable situation since it signifies a disinclination on the part of the members to give the time required for the preparation of a worth while paper or even for the discussion of one that has been prepared. It also signifies that men are becoming less and less confident of the scientific value of their own clinical experience—perhaps be-

cause they have so frequently been told they are not competent to evaluate such experience. It also tends to create a sort of intellectual indolence.

From another point of view the situation may be regarded as a stage in the progress of scientific medicine, for it facilitates a rapid and general dissemination of the more recently acquired knowledge of diseases and their treatment. The field of scientific medicine is now so vast, the literature is so voluminous, new scientific data are brought out so rapidly, that it is impossible for the average man to assemble these, properly co-ordinate them with facts already known, and arrive at definite conclusions. Few of those who have the inclination and the ability have the time. It is much better to get the assembled facts and conclusions, concisely and attractively presented, from those who are experienced teachers or writers, those who for one reason or another have found it possible to keep in touch with every step that is made toward more definite knowledge in their particular fields of work. It is possible for one of these men to convey to an audience, in an hour, the essential facts contained in an amount of literature it would be impossible for any one of them to read during the spare time at his command.

Reports show that programs of this character attract the members and the attendance is much larger than when the meetings were conducted on the old plan. It would seem that since it has a stronger appeal to the majority the change is justified. If we are to be progressive we must change with the changing times. Instead of regretting the good things that are lost let us find the good things, perhaps the better things, at hand.

The meetings of our county societies simply reflect the attitude of the profession generally toward this effort at

rapid dissemination of medical knowledge. It is more strongly reflected in the large attendance upon various clinical meetings where day after day, for a week or more, the men patiently listen to those who have acquired more or less renown in some particular line of work, and who in a way are acting as middle men between the producers and the consumers in purveying scientific medical knowledge. The demand is increasing and the supply is by no means exhausted. The popularity of teaching clinics is growing. There are local, regional, sectional, interstate, national and international clinics and clinical congresses. But the vogue of this time is the clinical tour, there are interstate tours and international tours, tours for surgeons, for internists and tours for specialists of various kinds. There is a demand for these things of course, but there is a suspicion that the fundamental purpose, or at any rate the original purpose, has been submerged in an ever prevalent desire for display. Men frequently change their general appearance, they sometimes change their habits but rarely their natures. In some of us the commercial instinct predominates and perhaps we see in these clinics and clinical tours a good investment that may yield both intellectual and financial profit. The rapidity with which they have gained their popularity presages an early loss of prestige.

#### THE DEDUCTIBILITY OF TRAVELING

##### EXPENSES: A CRISIS

Do you want for yourself and your fellow physicians the right similar to that accorded to other professional and business men to deduct in the computation of federal income taxes expenses incurred in attending meetings of medical organizations? The Robinson amendment to the Revenue Reduction Bill (H. R. 1) authorizes the deduction of such expenses. The Senate Committee on Finance will con-



sider that amendment at an early date. A brief to be submitted in support of that amendment on behalf of the American Medical Association is printed on pages 88 to 95 of this issue. Read it, then telegraph or write to your Senator to support the amendment.

If the amendment is adopted and passed by the Senate, it will have to be passed by the House of Representatives before it becomes a law, so write to your Representative at the same time.

Unless you demand now that this unjust discrimination against the medical profession be discontinued, you will not be in a position to complain of its continuance.—(A.M.A. Bulletin, March.)

—————R—————

#### **A Letter From Leavenworth County**

March 6, 1928.

To the Kansas Medical Journal

I wish to call the attention of the readers of *The Journal* to the fact that Kansas physicians are unable to prescribe and secure alcohol for their patients and laboratories under the Federal Prohibition Act, while just across the line in Missouri conditions are such that the Missouri physicians can under certain requirements prescribe and obtain such alcohol, due to a difference in the state laws.

Recently Dr. F. J. Haas, of Leavenworth, prescribed some alcohol with phenol and formalin as a gargle for a patient, 86 years of age and a teetotaler. Dr. Haas also prescribed alcohol with phenol and formalin for an ear disease. The druggists of Leavenworth were restrained from filling these prescriptions by the federal inspector. The inspector was right and there stands no complaint. But the laws of Kansas are so now that Kansas physicians cannot secure their constitutional rights, and the delegates to the meeting of the Kansas Medical Society should take action in May at Wichita to secure legislative enactment whereby these rights may be secured.

On November 2, 1880, the people of Kansas voted this amendment to the constitution of the state: "The manufac-

ture and sale of intoxicating liquors shall be forever prohibited in this state, except for medical, scientific and mechanical purposes." The legislature of 1881 enacted laws necessary for its enforcement, and succeeding legislatures elaborated amendments so that we now have the prohibitory law as it stands.

The Leavenworth County Medical Society respectfully asks the delegates to the coming meeting to consider some way to secure from the legislature some recognition of the constitutional rights of the medical profession of this state.

Leavenworth County Medical Society,

J. L. EVERHARDY, Secretary.

—————R—————

#### **CHIPS**

Reeves, in the Archives of Otolaryngology, February, states that he has found acriviolet, which is a combination of acriflavine and gentian-violet, to be practically a specific treatment for Vincent's angina. He was led to its use because it was claimed that the bacillus was gram-negative while the spirillum was gram-positive. Acriflavine was used for the gram-negative and gentian-violet for the gram-positive. A 2 per cent solution is used once a day. Pain disappears in two days and a cure results in five days.

Extracts of the posterior lobe of the pituitary gland have been in general use for some time, and three types of activity have been recognized—oxytocic, pressor and renal—and for that reason these extracts or solutions of them have been used in obstetrics, in the treatment of surgical shock and in the control of diabetes insipidus. There has been much contention over whether there was really more than one active principle in the extract. The recent work of Kamm and his associates, recently published in the *Journal of the American Chemical Society*, seems to have settled this question and paved the way for some very interesting and profitable clinical investigations. Two principles have now been isolated, alpha-hypophamine the oxytocic, and beta-hypophamine the pressor principle, and there are now available for clinical trial.

In this issue appears the preliminary announcement of the Kansas City Southwest Clinical Society for its Annual Fall Conference to be held in Kansas City, Mo., October 9 to 11, inclusive. It is expected that the coming meeting will be more widely attended than any of the former successful meetings. A departure of interest to the profession of the Southwest is that the program for this meeting will consist mainly of symposia and clinical programs arranged especially for the general practitioner. All special subjects will be correlated with this idea in mind. In fact the entire program will approximate a practical post-graduate course in those problems of every day interest.

The American Medical Association Hospital Register which appeared in the special Hospital number of the Journal, March 24, contains some interesting information. There are 107 general hospitals in Kansas with a capacity of 5,013 beds and with an average of 2,928 patients. There are ten hospitals for the care of nervous and mental diseases with a capacity of 4,588 beds, with 4,430 patients. There are of all types 136 registered hospitals with 10,453 beds with 7,886 patients. Of the total number of hospitals in the state, six are Federal, 15 are state, three are county, seven are city, one is city and county owned, or 32 of the 136 are government owned. Of the 104 non-government owned, 38 are church, two fraternal, four industrial, 32 individual or partnership, 28 independent. Of these 136 hospitals 22 have been approved by the college of surgeons, and five have been approved for internship by the Council on Medical Education and Hospitals. Twenty-one hospitals in Kansas were refused registration.

The Pittsburgh Medical Bulletin quotes from an address given at a meeting of chiropractors and sympathizers in Philadelphia by B. J. Palmer, the founder of the cult, as follows:

"Fully 80 per cent of the chiropractors in Pennsylvania are practicing medicine, not chiropractic. That is a sorry fact, gentlemen—we are practicing medicine. During the last year, I have been in

every state in the Union, and this condition exists throughout. My ideals concerning chiropractic were shattered. Chiropractic is doomed. You have drifted so far from the basic principles of chiropractic that you have lost your identity and brought the basic science bill upon your heads. Twenty-eight chiropractic schools have closed recently, and many others will follow. The supreme courts in seven states have handed down legal injunctions during the last eighteen months, whereby these states are lost forever to chiropractic. I warned Ohio not to compromise. They tried to pass a bill engrossing medical principles and practices. I predicted its failure. It lost by 250,000 votes. There has been \$250,000 of chiropractic money spent in California in the last year. You cannot defeat the ends of science. The basic science bills are the buck shot which we deserve for trespassing. When chiropractors preach and practice and try to become physicians, then it is justifiable for the medical men to educate the chiropractor. Now beat that argument if you can. That is why we are losing right along. This will probably be the last time you will see me as a chiropractor, as I do not propose to lose my good money in fighting against sound arguments."

—R—

### **Sixty-Second Annual Meeting, Kansas Medical Society, Tuesday, Wednesday and Thursday, May 8th, 9th and 10th, Wichita, Kansas.**

All general sessions will be held in the Spanish Ballroom, Mezzanine Floor, Lassen Hotel.

The following guests of honor will address the Society:

Dr. John Prentiss Lord, Professor of Orthopedic Surgery, Nebraska University, Omaha, Neb.

Dr. Otto H. Schwarz, Associate Professor of Obstetrics, Washington University, St. Louis, Mo.

Dr. M. F. Engman, Professor Clinical Dermatology, Washington University, St. Louis, Missouri.

Dr. John Green, Jr., Associate Professor Ophthalmology, St. Louis University, St. Louis, Mo.

Dr. Waltman Walters, Mayo Clinic, Rochester, Minnesota.

#### **PROGRAM**

"State Medical Societies—Trypanosomiasis—Report of Case"—Dr. John A. Dillon, President, Larned.

"The Constitutional Psychopath and the Criminal Law"—Dr. H. C. Curtis, Wichita.

Discussion opened by Dr. Karl Menninger, Topeka.

"Birth Control"—Dr. F. W. Tretbar, Stafford.



Subject not yet received—Dr. John Prentiss Lord, Omaha, Neb.

"State Medicine"—Dr. C. H. Lerrigo, Topeka.

"Uses and Abuses of Free Medical Service"—Dr. E. A. Reeves, Kansas City.

"Building up the County Society"—Dr. W. Gordon Emery, Hiawatha.

Discussion opened by Dr. H. E. Haskins, Kingman.

"Plastic Surgery"—Dr. E. C. Padgett, School of Medicine, Kansas University.

"The Toxemias of Pregnancy"—Dr. Otto H. Schwarz, St. Louis, Mo.

"Acute Intestinal Obstruction"—Dr. R. S. Haury, Newton.

Discussion opened by Dr. Harry Horn, Wichita.

"Fuso-Spirillosis"—Dr. L. P. Warren, Wichita.

Discussion opened by Dr. J. W. Cheney, Wichita.

"The Management of Eye Injuries"—Dr. F. C. Boggs, Topeka.

"Treatment of Acute Middle Ear"—Dr. L. B. Spake, Kansas City.

Discussion opened by Dr. George Litsinger, Topeka.

"Conservation of Eyesight"—Dr. John Green, Jr., St. Louis, Mo.

"Epidemic Encephalitis and the Country Doctor"—Dr. B. A. Higgins, Sylvan Grove.

Discussion opened by Dr. H. N. Moses, Salina.

"Drainage in Abdominal Cases"—Dr. F. D. Kennedy, Norton.

"Anesthesia—Local vs. General"—Dr. Daniel Peterson, Herington.

Discussion opened by Dr. E. J. Reichly, Herington.

"The mechanism in Psychogenic Disease"—Dr. N. R. Smith, Halstead.

"Eczema and Zidig"—Dr. M. F. Engman, St. Louis, Mo.

"Early Diagnosis of Tuberculosis"—Dr. F. A. Trump, Ottawa.

Discussion opened by Dr. C. S. Kenney, Norton.

"The Diagnostic Value of Certain Symptoms in Abdominal Lesions"—Dr. C. W. Lawrence, Emporia.

Subject not yet received—Dr. L. E. McFarlane, Manhattan.

Discussion opened by Dr. Mervin T. Sudler, Lawrence.

"Treatment of Acute Polio from the Pathological and Physiological Standpoint"—Dr. E. D. Ebright, Wichita.

"The Use of Digitalis"—Dr. P. T. Bohan, School of Medicine, Kansas University.

Discussion opened by Dr. H. N. Tihen, Wichita.

Subject not yet received—Dr. Waltman Walters, Mayo Clinic, Rochester, Minnesota.

"Ocular Headache"—Dr. L. S. Powell, Lawrence.

Discussion opened by Dr. C. S. Trimble, Emporia.

"Appendicitis"—Dr. C. S. Newman, Pittsburg.

"The Sedimentation Test in Surgery"—Dr. J. L. Lattimore, Topeka.

"Congenital Malformations of the Kidney"—Dr. A. Boese, Coffeyville.

"Narcotic Drug Addiction"—Dr. Forrest A. Kelley, Winfield.

#### MEETING OF THE COUNCIL

The Council of the Kansas Medical Society will meet in joint session with the secretary of all county societies on Tuesday, May 8th, at 12:15 p. m. in the Grill Annex in basement of Lassen Hotel. Other meetings of the Council will be held at the call of the president.

The new Council will meet and organize in the

Grill Annex at the Lassen Hotel on the last day of the meeting immediately following the meeting of the House of Delegates.

#### MEETING OF THE SECRETARIES

There will be a complimentary luncheon of the secretaries of all county societies on Tuesday, May 8th, at 12:15 p. m. in the Grill Annex in basement of Lassen Hotel. This will be a joint meeting with the Council of the Kansas Medical Society. Secretaries will please make reservations when registering.

#### MEETING OF HOUSE OF DELEGATES

Tuesday, May 8th

The House of Delegates will meet in the Spanish Ballroom, Mezzanine Floor, Lassen Hotel, at 7:30 p. m. The following order of business will be observed.

Reading of Minutes of Last meeting.

Report of Secretary, Treasurer, Councilors and Medical Defense Board.

Reports of Standing Committees.

Unfinished business.

New business.

Thursday, May 10th

The meeting of the House of Delegates will be held in Grill Annex in basement of Lassen Hotel at 8:00 a. m.

Roll call

Election of Officers: President elect; Vice President; Treasurer; Councilors for the Third, Sixth, Tenth and Twelfth and one year unexpired term of the Ninth District.

Unfinished business. New business.

#### ENTERTAINMENT

The Sedgwick County Medical Society will give a banquet, followed by a dance in the Spanish Ballroom of the Lassen Hotel, Wednesday, May 9th at 7:00 p. m., for the members and invited guests of the Kansas Medical Society, and their ladies. Golf Tournament at the Wichita Country Club, Monday, May 7th, 1:00 p. m. All players must register at the club before playing. There will be a banquet Monday evening at the club for all members who register for the golf tournament. For further information write to Dr. R. W. Hissem, Wichita, Chairman, Local Committee on Entertainment.

#### KANSAS MEDICAL AUXILIARY

Headquarters—Lassen Hotel

#### Program

Tuesday, May 8th

9:00 to 12:00 a. m.—Registration West Side Mezzanine Floor, Lassen Hotel.

2:00 p. m. Bright Tea—Residence of Dr. and Mrs. R. W. Hissem, 321 North Roosevelt Avenue.

Cars will be at the Lassen Hotel to take the ladies to the tea.

Wednesday, May 9th

1:00 p. m. Luncheon at the Innes Tea Room, Plates 85 cents.

Business meeting of the Auxiliary immediately following the luncheon.

Introducing speaker of the afternoon—Dr. Alfred O'Donnell, Ellsworth.

Address—Dr. John A. Dillon, Larned.

Reports of various auxiliaries.

Election of officers.

7:00 p. m. Banquet at the Lassen Hotel for all doctors and their ladies.

Dancing following the banquet.

Thursday, May 10th

These hours will be left open for shopping.

Golf courses will be open to ladies who wish to play.

#### Officers

Mrs. O. D. Walker, President, Salina.  
Mrs. H. L. Scales, First Vice President, Hutchinson.  
Mrs. H. F. Hyndman, Second Vice President, Wichita.  
Mrs. P. W. Beckman, Secretary, Lindsborg.  
Mrs. W. E. Haskins, Treasurer, Kingman.

#### Councilors

Mrs. Edward K. Lawrence, Hiawatha; Mrs. W. J. Scott, Ottawa; Mrs. E. C. Duncan, Fredonia; Mrs. W. E. McVey, Topeka; Mrs. J. T. Scott, St. John; Mrs. H. P. Daniels, Wichita; Mrs. V. R. Parker, Natoma; Mrs. L. S. Nelson, Salina; Mrs. J. Haddon Peck, St. Francis; Mrs. D. R. Stoner, Ellis; Mrs. O. E. Smith, Leoti; Mrs. Foster L. Dennis, Dodge City.

#### Standing Committees

Organization—Mrs. Jonathan B. Carter, Wilson.  
Public Relations—Mrs. Alfred O'Donnell, Ellsworth.  
Constitutional and By-Laws—Mrs. Lucena Ax-tell, Newton.

#### HOTELS

Lassen Hotel, Headquarters; Broadview Hotel, McClellan Hotel.

#### STANDING COMMITTEES KANSAS MEDICAL SOCIETY

Executive Committee of Council: John A. Dillon, M.D., Larned; J. F. Hassig, M.D., Kansas City; George M. Gray, M.D., Kansas City; O. P. Davis, M.D., Topeka.

Defense Board: O. P. Davis, M.D., Topeka; C. S. Kenney, M.D., Norton; W. F. Fee, M.D., Meade.

Bureau of Public Relations: John A. Dillon, M.D., Larned; J. F. Hassig, M.D., Kansas City; George M. Gray, M.D., Kansas City; O. P. Davis, M.D., Topeka; Earle G. Brown, M.D., Topeka; W. S. Lindsay, M.D., Topeka; L. F. Barney, M.D., Kansas City; W. E. McVey, M.D., Exec. Sec'y, Topeka.

Committee on Public Health and Education: Earle G. Brown, M.D., Topeka; J. T. Axtell, M.D., Newton; H. E. Haskins, M.D., Kingman; George I. Thacher, M.D., Waterville; J. E. Wolfe, M.D., Wichita; L. B. Gloyne, M.D., Kansas City.

Committee on Public Policy and Legislation: W. S. Lindsey, M.D., Topeka; C. S. Huffman, M.D., Columbus; Karl A. Menninger, M.D., Topeka; John A. Dillon, M.D., Pres. Ex-of., Larned; J. F. Hassig, M.D., Sec'y Ex-of., Kansas City.

Committee on School of Medicine: L. F. Barney, M.D., Kansas City; Alfred O'Donnell, M.D., Ellsworth; L. G. Allen, M.D., Kansas City; J. T. Scott, M.D., St. John; H. J. Duval, M.D., Hutchinson.

Committee on Hospital Survey: George M. Gray, M.D., Kansas City; David W. Basham, M.D., Wichita; W. M. Mills, M.D., Topeka.

Committee on Medical History: W. E. McVey, M.D., Topeka; W. S. Lindsay, M.D., Topeka; O. D. Walker, M.D., Salina.

Committee on Scientific Work: J. F. Hassig, M.D., Kansas City; C. H. Briggs, M.D., Wichita; H. T. Jones, M.D., Lawrence.

Committee on Necrology: E. E. Liggett, M.D., Oswego; J. F. Hassig, M.D., Kansas City; W. E. McVey, M.D., Topeka.

J. F. HASSIG, M.D., Secretary.

—R—

"My wife believes there are two sides to every question."

"So does mine. Hers and her mother's."—Life

## "Beating Back"

### THE PRODIGAL

The Altadena Hospital staff of 110 physicians has established a Physical Therapy Department. Physical therapy is defined by one of the members of the staff as "the use of natural forces, such as air, light, heat, water and exercise in the treatment of disease." He states the fact also that "physical therapy is not a new form of therapy which has been revived in a scientific manner due to our increased knowledge of physics, electricity, etc." Heretofore he says "physical therapeutics has been practiced by the irregulars and for this reason has in the past been generally discredited (?) by the public and by the regular profession. But with the advent of the great world war its therapeutic usefulness became manifest. The army and the navy established many rehabilitation hospitals and two years ago the American Medical Association created a council of physical therapy. That gave to physical therapy a standing as a therapeutic measure along with medicine and surgery. Now all first class hospitals have well equipped physical therapy departments, and also some of the leading physicians have well equipped physical departments in their offices."

The doctor's statements as to actual conditions of Mosaic health laws and therapy being revived and the vis a tergo of the quack forcing the issue is in the main correct. The doctor's statement of the case (with a slight variation) calls to mind the judge's attempt to free uncle Remus (the negro) who had stolen the chickens and had been caught with the goods. When the judge asked uncle Remus if he ever took a drink the old negro's countenance brightened, his eyes sparkled, all of his ivory showed up and he came back with—"Now jedge is dat a suggestion or an invitation?" Is the doctor's statement a suggestion or an admission? or both?

Moral: Institutional medicine, the same as institutional religion, has had its day.

Hippocrates said: "What the sun does not heal, medicine heals; what medicine does not heal, fire heals."



It is reported of Dr. Bier, head of the Charité, Berlin's greatest hospital, that he believes ancients knew something about the healing art by the use of fire. He has reported at a session of the Berlin Medical Society the result of his successful experiments with fire (the cautery) as a curative agent in chronic disease of the joints, obstinate suppuration, etc. He lays back the skin of the affected part and scarifies the tissues underneath with a thermo cauterizer. After the burning is finished the skin is replaced, a drainage tube left in situ and this method avoids the scar made by cauterizing the surface.

It would seem that the curative effect of the fever produced by the subdermal cauterization is founded upon the practice of curing paralysis by inducing malarial fever in the patient.

Tradition and old documents bear out the idea that malarial therapy had been used by the Peruvians before the time of Columbus.

## SOCIETIES

### STAFFORD COUNTY

Society met in St. John Thursday evening, March 8th.

Dinner was served at the Blue Lantern Tea Room with the following members present: F. W. Tretbar, J. J. Tretbar, Stafford; M. M. Hart, Macksville; C. S. Adams, Byers; L. E. Mock, R. E. Stivison, J. T. Scott, St. John. The ladies present were Mrs. C. S. Adams, Mrs. L. E. Mock, Mrs. J. T. Scott.

Dr. R. H. Grieve of Turon was the invited guest but on account of sickness was unable to attend. Dr. J. T. Scott read a paper entitled "Shall the State Dues be Raised?" This paper elicited general discussion and resulted in the passage of a motion instructing our state delegate to support the proposed amendment to raise the dues to the amount necessary to provide sufficient funds to carry on all state society activities.

The program follows:

1. Pneumonia, Dr. R. H. Grieve, Turon.

Discussion opened by Dr. F. W. Tretbar, Stafford.

2. Shall the State Dues be Raised?, Dr. J. T. St. John.

Discussion opened by Dr. M. M. Hart, Macksville.

Leave behind all worry and strife,

Gas up the Lizzie and bring the WIFE;

Discuss the papers, don't cuss the game,

When you get home you will be glad you came.

J. T. SCOTT, Secretary.

### FRANKLIN COUNTY SOCIETY

The Franklin County Medical Society held its regular meeting Wednesday, February 29. Dr. J. R. Scott, president, called the meeting to order. The regular business and minutes were dispensed and Dr. Scott introduced Dr. Carl Farris of Kansas City, who gave a very interesting talk on the heart. He stressed the frequency with which this malady takes its toll of human life. In the line of treatment he demonstrated the inaccuracy of the drop method in measuring digitalis.

Dr. Ferdinand Helwig of the pathology department then read an excellent paper on postmortem findings in clinically diagnosed heart failure. He said that often the pathological findings do not bear out the clinical symptoms. He spoke of the frequency of cardiac aneurysms and rupture of the heart. He believes with others that a faulty metabolism is behind a big percentage of coronary disease. He qualified his statement to say that he didn't know what influenced this particular morbid metabolism.

Dinner was served before the meeting.

The next meeting will probably be March 28 and will depend upon receiving a motion picture from the State Tuberculosis Society. The meeting will deal with tuberculosis.

JOHN A. DYER, Secretary.

### CLAY COUNTY MEDICAL SOCIETY

March 21, 1928, the Clay County Medical Society held its regular monthly meeting at the Clay Center Hospital. The subject for the evening was "Hyperthyroidism," which was very ably handled by Dr. C. C. Nesselrode of Kansas City, Kansas. Three clinical cases of hyperthyroidism were exhibited before the Society and Dr. Nesselrode later gave a splendid lecture on the same subject.

An interesting case of multiple embolism was reported by Dr. Bale.

Besides the regular members of the Society and the nurses at the hospital, Lieut. Col. J. W. Grissenger, Major Hillman and Major Hawley, all of Fort Riley, were present.

There being no further business the meeting adjourned.

X. OLSEN, M. D., Secretary.

#### DECATUR-NORTON COUNTY SOCIETY

The Decatur-Norton County Medical Society met at the Cozy Theater in Norton on March 22.

The following program was presented:  
Business meeting.

Election of officers.

Paper, "Some Observations on Eye Injuries, Trachoma and Systemic Eye Diseases," Dr. James W. May, Kansas City, Kan.

Paper, "Surgical Consideration of Gastric Ulcer," Dr. C. C. Nesselrode, Kansas City, Kansas.

Paper, "Blood Transfusion in Infants and Children, Theory, Technic, Results," Dr. Wilford W. Barber, Denver, Colo.

Dinner (Guests of Norton Physicians) 6:00 p. m., Kent Coffee Shop.

C. S. KENNEY, M.D., Secretary.

#### NORTHEAST KANSAS SOCIETY

The annual meeting of the Northeast Kansas Medical Society was held at the City Hall in Leavenworth, Thursday, March 29. The attendance was small, perhaps on account of very unpleasant weather. Dr. E. G. Brown, Secretary State Board of Health, presented a report of a study of venereal disease prevalence in twenty Kansas counties. Counties from various parts of the state, none of them adjoining and none of them a border county, were selected for study. Complete reports from physicians in these counties showing the number of cases of venereal disease under treatment were secured. The results were carefully tabulated.

Dr. Leon Matassarini, Leavenworth, read a paper on Skin Diseases in the United States Army. He stressed the necessity for cleanliness among the soldiers and described various sanitary

measures that had been or should be adopted.

Dr. W. O. Nelson, Lawrence, discussed the subject of frontal sinus infection. He showed a number of pictures and plates and described an external operation showing a case that he had recently operated on.

Dr. S. L. Axford, Lansing, read a report of his experience in the treatment of pneumonia with pneumoquin. He gave his method of administering the drug and a general report of the results. He had used it in over 200 cases with uniformly good results.

The election of officers resulted in the selection of Dr. J. L. Everhardy, Leavenworth, for president; Dr. W. O. Nelson, Lawrence, for vice president, and Dr. E. G. Brown, Topeka, for secretary-treasurer.

#### FRANKLIN COUNTY SOCIETY

The regular meeting of the Franklin County Medical Society was held at the Nelson Hotel, Ottawa, March 28. Supper at 6:30 p. m., with business meeting following. The paper of the evening was given by Dr. George W. Davis. The subject was "specific medication." The doctor took some liberties with the definition of specific medicine as given by Webster, and then proceeded to enumerate the things which his experience seemed to justify in the classification under his liberal definition. The paper was quite unique, but withal entertaining and instructive, and called out a very lively discussion of the general subject of medicine and medication.

The society accepted the invitation to meet at the Kansas State Hospital at Osawatomie the last Wednesday in May. Dr. F. A. Carmichael, superintendent of that institution, has arranged a program featuring a talk by Dr. Kinney on tuberculosis, together with several clinics by the staff of the institution. Dr. Carmichael will be host to the members of the society at a dinner arranged by Mrs. Carmichael.

The meeting was well attended, as our society usually is, and some very useful and pleasant hours were devoted to the session.

J. A. DYER, M.D., Secy.



### Medical School Notes

Dr. W. J. Engel '26, who recently visited his brother, Dr. Lawrence P. Engel, Kansas City, has returned to Crile's Clinic, Cleveland, Ohio, where he will remain for another year.

An experiment to be started this summer is to send out Junior Students to reputable physicians over the state to serve as apprentices for a period of two months. If this plan proves successful it will be made a part of the required curriculum.

Last year Seniors each week were sent to the State Hospitals at Topeka and Osawatomie for instruction in psychiatry under the supervision of Dr. Perry and Dr. Carmichael respectively. Each student spent two weeks at one of these institutions. This plan was so popular among the students that it was continued this year.

Dr. Russel Haden has recently published a book, "Dental Infection and Systemic Diseases" which has received a great deal of favorable comment. Dr. Haden is Head of the Department of Experimental Medicine, Kansas University Medical School.

The May number of the Journal of the State Medical Society will be the Medical School number. Dr. Thomas G. Orr, Head of the Department of Surgery, will have charge of the material contributed by the Medical School for this number.

Mr. Charles Cuthbert, State Architect, visited the Medical School recently to look over the new buildings. He expressed himself as very much pleased with the progress of the work. The fourth floor of the Nurses' Home and the Hospital Unit is now being constructed.

Dr. Logan Clendening, Associate Professor of Medicine, was in St. Louis recently to take up the matter of the revision of the second edition of his book, "Modern Methods of Treatment."

Dr. Alfred O'Donnell, of Ellsworth, Kansas, recently visited the Bell Memorial Hospital.

Dr. C. T. McVicar, of the Mayo Clinic, visited the Bell Memorial Hospital, March 3.

Dr. J. A. Myers, President of the Minnesota Anti-Tuberculosis Association vis-

ited the Bell Memorial Hospital, March 13.

Dr. Russel L. Haden attended the meeting of the New England Society of Otolaryngology at Boston, Massachusetts, March 14, also the American Section of the International Committee for the Study of Rheumatism, at Philadelphia, March 17.

At the Post Graduate Extension Course of the University of Oklahoma, at Oklahoma City, February 27, 28 and 29, Dr. P. T. Bohan delivered lectures on "Cardiac Disorders," "Anaemias and Blood Dyscrasias," "Borderline Medical and Surgical Cases" and "Functional Nervous Disorders."

Dr. O. J. Dixon read a paper before the Lynn County Medical Society at Cedar Rapids, Iowa, February 23, on "Brain Abscess as an Ear Complication," and Dr. Paul F. Stockey on "Experimental Work on Erysipelas."

Dr. F. C. Helwig and Dr. Caryl Ferris talked to the Franklin County Medical Society, Ottawa, Kansas, February 29, on "Pathology of Non-Infectious Myocarditis" and "Clinical Diagnosis of Cardiac Failure" respectively.

Miss Mary Scott, graduate of the Bell Hospital Nurses' Training School, has recently returned from Cleveland, Ohio, where she has been taking post-graduate work at the Cleveland Maternity Hospital, Western Reserve University. Miss Scott will take charge of the Prenatal Department of the Bell Memorial Hospital.

Dr. and Mrs. Fred Campbell announce the birth of a daughter, Carolyn.

Dr. Lawrence P. Engel addressed the Labette County Medical Society, February 15, on "The Use of Iodine in the Treatment of Goiter."

Dr. Sam Snider addressed the Brown County Medical Society at Hiawatha, March 9, on the "Diagnosis and Treatment of Pulmonary Tuberculosis."

Dr. E. T. Gibson was elected Secretary-Treasurer of the Missouri-Kansas Neuropsychiatric Society which met at the Menninger Psychopathic Hospital in Topeka, February 15.

Dr. Ralph Wilson addressed the Bourbon County Medical Society at Fort

Scott, Kansas, February 20, on "The First Trimester of Pregnancy," and Dr. Homer Beal spoke on "Mastoiditis in Infancy."

Dr. Harry M. Gilkey addressed the Douglas County Medical Society at Lawrence, February 2.

Dr. Charles H. Ewing of Larned, Kansas, class 1902, University of Kansas Medical School, visited several of his former classmates recently.

Dr. and Mrs. Albert S. Welch announce the birth of a son, Albert Bergen, February 15.

Dr. Clinton K. Smith gave an address at Maryville, February 10, on "Differential Diagnosis in Disease of Kidney."

Dr. Donald Black addressed the Crawford County Medical Society, Girard, Kansas, February 17 on "Anemia." Dr. James Montgomery addressed the same group on "Disease of the Spleen."

—R—

### DEATHS

Albert Ross Burgess, Wichita, aged 48, died January 30. He graduated from the University of Illinois College of Medicine, Chicago, in 1905.

P. R. Moore, Effingham, aged 83, died March 7, from cerebral hemorrhage. He graduated from Ohio Medical College, Cincinnati, in 1877. He was a member of the Society.

Robert Scott Mahan, Havana, aged 73, died November 18, 1927, of angina pectoris. He graduated from the University of Louisville School of Medicine in 1898.

Jonathan B. Carlile, El Dorado, aged 83, died in January of pneumonia. He graduated from Missouri Medical College, St. Louis, in 1886. He was a Civil war veteran and for many years a member of the State Board of Health.

William Howard Wells, Coffeyville, aged 85, died January 31, at Bell Memorial Hospital, Kansas City, of broncho pneumonia. He graduated from Georgetown University School of Medicine in 1868. He was a member of the Society.

D. A. Iliff, Muskogee, Oklahoma, aged 73, formerly a resident of Cherokee, Kansas, and member of the Society, died

March 25. He graduated from the College of Physicians and Surgeons, Kansas City, Kansas, in 1901.

—R—

### BOOKS

Local Anesthesia by Geza de Takats, M.D., Asst. Prof. of Surgery, Northwestern University, School of Medicine, Chicago, Ill., with an introduction by Allen B. Kanavel, M.D., Prof. of Surgery, Northwestern University, Medical School. Octavo of 221 pages with 117 illustrations. Cloth, \$4.00. Philadelphia & London: W. B. Saunders Company, 1928.

In his foreword Dr. Kanavel says that in his clinic at the Northwestern University Medical School local anesthesia is now used in all cases where it is not contra-indicated, rather than only in those cases in which the indication is obvious. The author has prepared a very excellent guide for the use of local anesthesia, he has stated its disadvantages and the advantages, and has explained in detail how it may be used for the various purposes. The procedures are carefully explained and excellently illustrated.

The Surgical Clinics of North America (issued serially one number every other month). Volume 8, Number 1. (Lahey Clinic Number—February, 1928). 210 pages with 74 illustrations. Per clinic year (February, 1928, to December, 1928). Paper, \$12.00; Cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

This number of the clinics is a very interesting one. Lahey has some instructive clinics, on common duct stones, post-thyroid complications, incision for thyroidectomy, excision of gastrojejunal ulcer and esophageal pulsion diverticulum. Sara Jordon gives some information concerning the diagnosis of early malignancy of the colon and also on cholecystography. Mason discusses the management of severe hyperthyroidism, and described an air cushion he has devised for support beneath the back for patients during a cholecystectomy. He also describes a radical operation for carcinoma of the breast. Hurxthal discusses the use of quinidin sulphate in auricular fibrillation, he also discusses the use of postural drainage in post-operative pulmonary complications. Clute presents a case of elephantiasis and the Kondoleon operation, an abdominal wound rupture and discusses the value of enterostomy in peritonitis; and several other cases of interest. Fife



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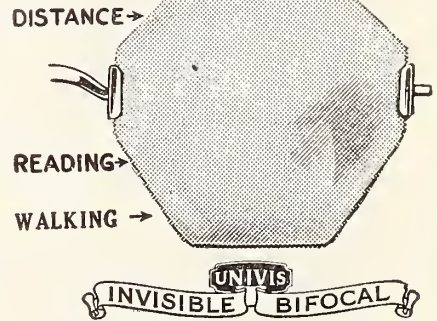
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Publishers Adjusting Ass'n, Inc., Est. 1902, Owner  
Railway Exchange Building, KANSAS CITY, MO.

describes the treatment of carbuncle. Smith and Leech also present interesting clinics.

Safeguarded Thyroidectomy and Thyroid Surgery, a manual designed as a practical guide for the general surgeon, by Charles Conrad Miller, M.D. Published by F. A. Davis Company, Philadelphia. Price \$3.75.

The author is rather positive in his opinion that in most unsatisfactory results from operation in hyperthyroid cases too little of the gland has been removed. He stresses the importance of getting rid of all possible foci of infection and incidentally describes a submucous tonsillectomy which ought to appeal to the careful operator. In the cardiac disturbances of goiter patients he advises digitalis in half dram doses every 4 hours until an ounce has been given and then its omission for two or three weeks. He has no confidence in the various injection treatments that have been advocated from time to time. He regards iodine, as do most other surgeons, as a temporary expedient or a preparatory treatment for operation.

Diseases of the Intestines, including the Liver, Gall-bladder, Pancreas and Lower Alimentary tract by Anthony Bassler, M.D., consulting gastro-enterologist at Vincent's, People's, Jewish Memorial and other hospitals. Third edition revised. Published by F. A. Davis Company, Philadelphia. Price \$9.00.

That a third edition and perhaps still others, of Bassler's excellent work on the intestines and lower alimentary tract should appear is to be expected. In this edition the author has added considerable new material on many of the subjects discussed. He seems to think that disorders of the intestines are supplanting in interest those of the stomach and that digestion below the pylorus, and the diseases and disorders there are of the greatest importance. In this volume the author has added to the text descriptions of the diseases of the liver, gall-bladder and ducts, and the pancreas. The work is excellently illustrated.

Muscle Function by Wilhelmine G. Wright with a foreword by J. Playfair McMurich. Published by Paul B. Hoeber, Inc., New York.

The author of this work was for long associated with the late Dr. Robert W. Lovett and had much experience in muscle training work in connection with the muscle deficiencies resulting from polio-



myelitis. In this line of work it is most essential to know what muscle or group of muscles may be involved in each movement. Careful investigation and experiment has enabled Miss Wright to add a great deal to the general knowledge of this subject. The information she has given the profession here is of the utmost practical value.

Treatment of Disease in Infants and Children by Hans Kleinschmidt, M.D., professor of Pediatrics, University of Hamburg. Translated from the fifth edition by Harry M. Greenwald, M.D. Published by P. Blakiston's Son & Company, Philadelphia. Price \$5.00.

This work is devoted exclusively to methods and remedies used in the treatment of diseases of children, the various steps being described very carefully. The subject of dietetics is given considerable space. There are numerous notes, comments and additions by the translator.

—R—

"And now it's the high cost of liver," mourns George G. Wood in his Eureka Herald. "When we think of the tons of liver we gave away as apprentice boy in a butcher shop, we wonder why in thunder we didn't invent a need for it and get rich."

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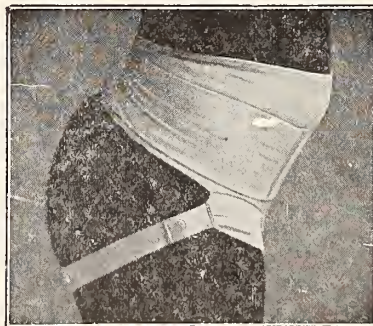
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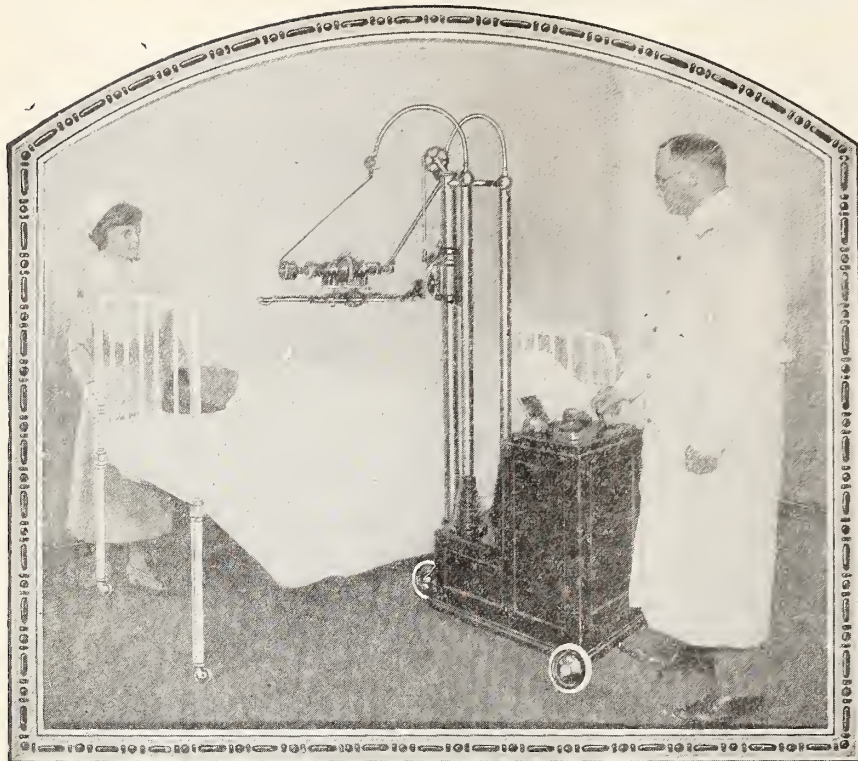
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# THE JOURNAL

of the

## Kansas Medical Society

VOL. XXVIII

TOPEKA, KANSAS, MAY, 1928

No. 5

### The Medical School

H. R. WAHL, M.D.

The Medical School is showing unusual signs of renewed growth as a result of the recent appropriation of money for additional buildings in Kansas City, Kansas. It was established in 1905 when the legislature accepted the gift of Dr. Bell of land and money for the erection in Rosedale of buildings for the development of a clinical department of the Medical School of the University of Kansas. Dr. Bell's gift provided a hilly site of seven acres, a laboratory building and a small hospital with a capacity of 35 beds. This was followed by a trying period when the growth was slow, largely because of the bitter dispute as to the final location of the Medical School. In 1911 the legislature appropriated \$50,000 for the erection of a modern hospital with a capacity of 65 beds. In 1915 another appropriation of \$24,000 was made for the erection of an outpatient or dispensary building. In 1919 an appropriation of \$200,000 was made for an enlargement of the hospital. Following the report of a special committee of the legislature it was decided to move the Medical School to a new and more accessible location one mile from the old one. This site comprised approximately 16 acres and was surrounded by three car lines and faced one of the main streets of the city. The money appropriated in 1919 was not used, it being considered inadequate to build the first unit on the new site. The new site was obtained by the donation of \$33,000 by subscription from alumni and friends of the School, \$33,000 voted by bonds of the City of Rosedale and \$35,000 in a special appropriation of the legislature, this including two modern private residences. In 1921, an appropriation of \$400,000 was made for the first unit of the new plant and plans were drawn for the complete plant that

would, when completed, cost \$3,000,000 and give Kansas a School of which she could well be proud. The present first unit and power plant were completed and occupied in 1924. Temporary barracks were constructed to house the dispensary and the colored ward and quarters for the maids and other help. This gave a hospital with a capacity of 120 beds but was entirely inadequate for the teaching needs. In 1927, an appropriation of \$300,000 was made for the erection of a nurses' home and a ward building which are at present in the course of erection. This will provide a hospital with a capacity of 225 beds with complete contagious and children's units. When the old hospital was abandoned it was leased to Kansas City as a contagious hospital but was occupied for only one year and then discontinued for "lack of funds." The old laboratory building is still in active use, being occupied by the library and pathology departments.

#### PRESENT ORGANIZATION

The first year and one-half of the medical course is being given at Lawrence while the last two and one-half years are provided for at Kansas City, where a part of the work is still being given in the old laboratory building which is occupied by the library and the pathology department. This causes considerable inconvenience for both students and instructors, in going from classes in the new buildings to those held at the old site. All of the clinical work is given at the new site where there are hospital facilities for 120 patients. Twenty-four of these are for colored patients who are placed in a wooden barracks building. The dispensary, where at present 3500 patients are seen each month, is also housed in a wooden barracks building. Last June a fire almost destroyed the dispensary building and threatened the colored wards. This necessitated considerable reconstruction with a rearrange-



ment to reduce the danger of fire to a minimum. Inasmuch as both are constructed of wood, the fire hazard is still great and they should be replaced by fireproof buildings at the earliest moment possible.

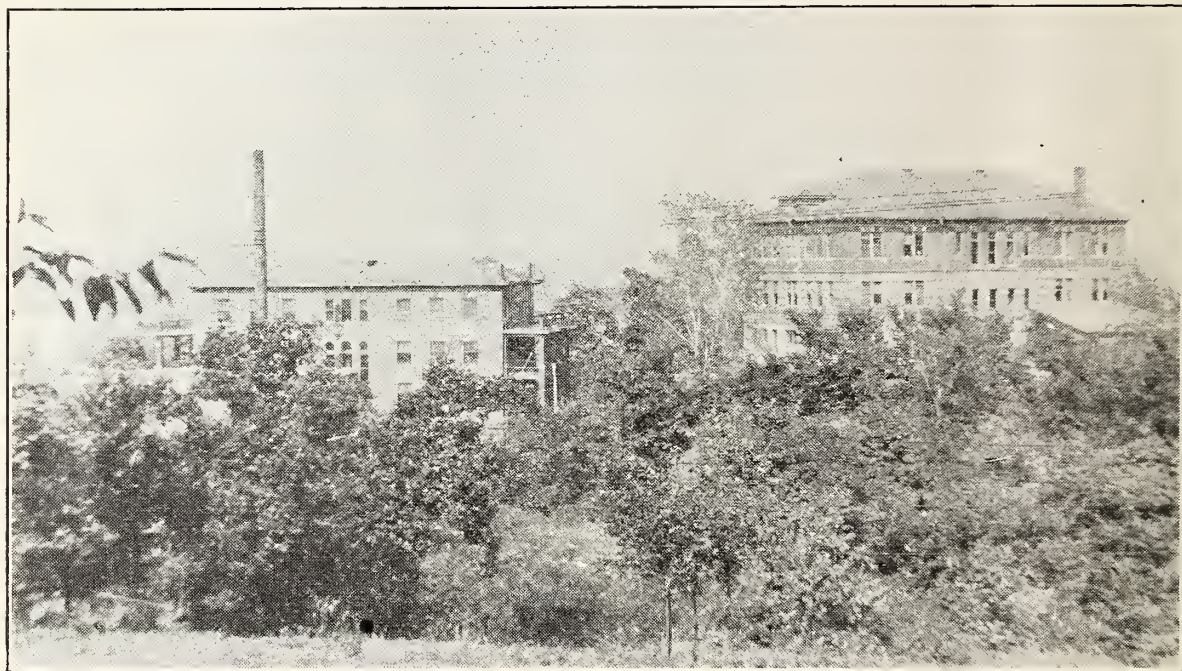
#### PERFORMANCE

*Training School for Nurses:* There are 59 pupil nurses, twelve of whom will be graduated in June. A high school education is required for admission into the Training School. The pupil nurses pay no tuition. They receive their maintenance and \$10.00 per month to pay for their uniforms.

*Outpatient Department:* In 1927 there were 37,165 visits, with 9398 new patients. Three hundred and ninety women

the Medical School. Approximately three hundred applications were received for entrance into the first year last summer. Seventy-five were admitted. There are facilities in the last two years for 40 students in each class. There are 56 students in the present second year class but because there are no funds for equipping the new ward building not over 40 should be admitted into the third year. When the new ward is opened sixty students can be accommodated each year. The present graduating class comprises 36 seniors.

The tuition fees vary from \$100 to \$150 each year, \$50 more being charged to non-residents of the state. This is much less than is charged by most medi-



were delivered in their homes by students under supervision of the obstetrical department. Dispensary patients are examined and treated practically free. A nominal registration fee is made and only the actual cost of the medicine charged. No patient is turned away because of lack of funds. In fact, about 15 per cent of the patients do not pay one cent. In this department thirty cases of rabies were treated. This department provided a large part of the clinical material used in teaching.

*The School of Medicine:* There are at present 206 medical students enrolled in

cal schools. The majority average over \$300 per year. The library supplies journals to members of the profession. The department of pathology performs autopsies without charge. During the past year 150 were performed in this way. Over 3000 tissue examinations were made, many being sent in from doctors all over the state. No charge is made for such examinations if the specimens are accompanied by a statement from the doctor that the patient is unable to pay the usual fee.

The School has established a number of free clinics. One of these is a ma-



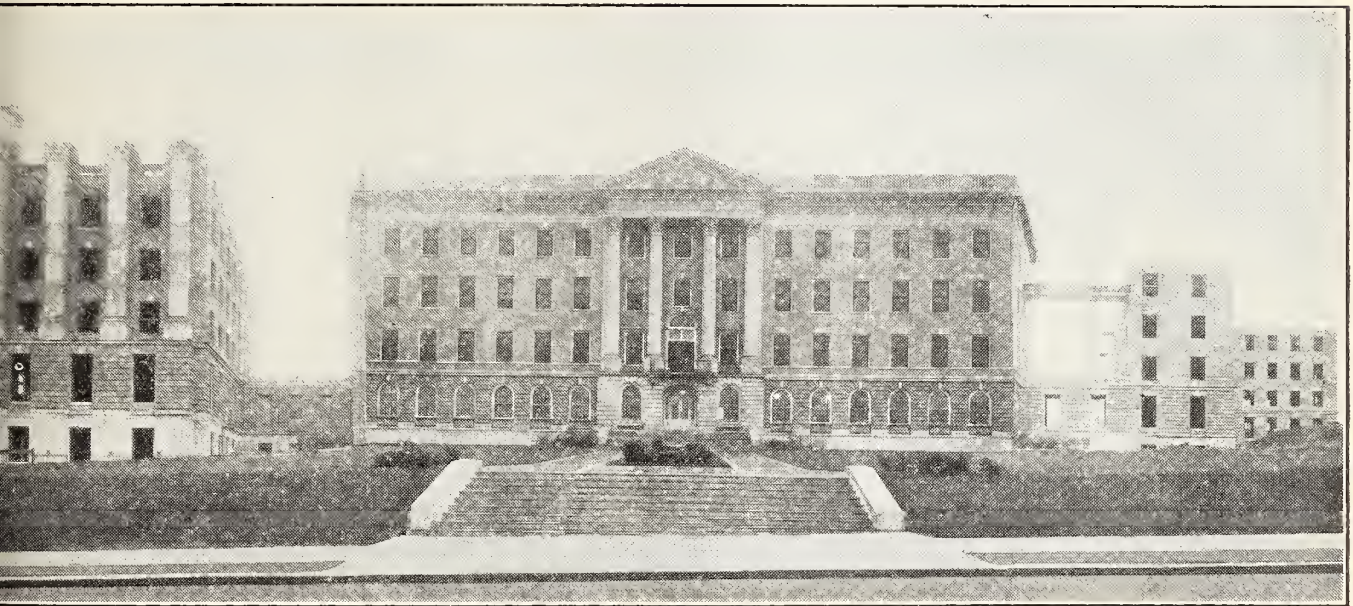
ternity clinic situated in one of the densely populated districts of Kansas City, Kansas, for charity cases. This provides clinical material for the Senior medical students.

There are also five orthopedic clinics established, one at Hutchinson, one at Pittsburg, another at Dodge City, one at Hays, and the last one at Ellsworth. At each of these clinics an orthopedic surgeon is sent by the School once a month. These clinics were established at the request of the local profession and all arrangements for handling the patients are under the control of the local profession. Some three hundred patients were seen in these clinics in the past year.

The School has also initiated some

avorable comment from all parts of the country.

Special work on intestinal obstruction, anemias, focal infection, high blood pressure and the use of liver extracts in high blood pressure have placed this institution in the forefront of research institutions of the country. In the past years some of our faculty members have been asked to give papers before medical societies along the Atlantic coast, a recognition of which the state can well be proud. The development of the use of liver extract in the treatment of cases of hypertension and eclampsia was first suggested by the work in this School and is now being carried on in many important medical centers of the country.



postgraduate courses in pediatrics, providing a lecturer who gives a series of clinics in the larger cities scattered over the state. This has met with considerable favorable comment from the doctors enrolled. A similar course of clinics is planned in internal medicine and other subjects.

*Research Work:* Many valuable contributions to medical science have recently been developed in the different departments of the Medical School. The departments of anatomy, physiology, and bacteriology have contributed some very valuable articles that have stimulated fa-

#### THE HOSPITAL

The following statistics are an indication of the work of the hospital during the year 1927.

|                                   |        |
|-----------------------------------|--------|
| Patients treated .....            | 2,689  |
| Free patients .....               | 230    |
| County patients .....             | 199    |
| Part pay patients .....           | 1,966  |
| Private pay patients .....        | 294    |
| Total patient days .....          | 36,618 |
| Births .....                      | 79     |
| Deaths .....                      | 132    |
| Autopsies .....                   | 82     |
| Cured .....                       | 1,177  |
| Improved .....                    | 886    |
| x-Ray pictures and treatments.... | 4,829  |



|                                  |        |
|----------------------------------|--------|
| Fluoroscopic examinations .....  | 234    |
| Radium treatments .....          | 44     |
| Operations .....                 | 2,186  |
| Patients for Physiotherapy ..... | 463    |
| Physiotherapy treatments .....   | 5,442  |
| Laboratory examinations .....    | 48,200 |
| Emergency cases .....            | 400    |

The average cost of a patient per day is a little less than \$5.00. This is approximately the average cost of the better modern hospitals. A teaching hospital is always more expensive to maintain than a private hospital. Our hospital at present has a capacity of 120 beds, 13 of which are private rooms. Five dollars and \$6.00 a day are charged for these private rooms. There are 12 beds for children under 10 years, for which \$1 a day is charged. In addition there are 8 cribs for new-borns, for which no charge is made. A rate of \$12.00 to \$17.50 per week is charged for the balance of the beds, numbering 87 in all. The cost of maintaining these beds is \$32.00 per week. The state appropriation makes up the difference between \$15.00 average a week paid by the patients and the actual cost of maintenance. In the last fiscal year the hospital received approximately \$60,000 from state appropriation for its maintenance. The hospital collected approximately \$123,000 in fees from the patients.

A large number of patients are received in the hospital from all over the state for diagnosis. They are sent by their doctors who want a complete diagnosis made and then have patient sent back to them for continued treatment.

The hospital is badly overcrowded and there is almost always a list of patients waiting to enter the hospital. This crowded condition accounts for the delays that often occur in the admission of patients. It will be relieved when the new ward building opens up.

**Admission of Patients Into the Hospital:** There are four ways of admitting patients into the hospital:

*First:* as a private patient of a member of the faculty of the School of Medicine. Such a patient pays the usual professional fee but may occupy either a private room or a ward bed. Such a patient to be admitted should apply di-

rectly to a member of this hospital staff who will make arrangements, but if no vacancy exists will have to go on the waiting list like all other patients. If a doctor in the state wishes to send a private patient to the hospital he should correspond with the staff member to whom he is referring his patient and he will make arrangements for getting a bed.

*Second:* as a clinical or ward patient. These patients come in either through the outpatient department or through letters from their respective family doctors, requesting their admission and vouching for their inability to pay any professional fee. Letters regarding cases of this kind should be addressed to the Superintendent of the hospital. These patients pay \$15.00 per week for a ward bed, plus minor charges for laboratory, x-ray and operative work.

Often patients from various parts of the state come to the outpatient department and hospital treatment is urgently recommended. Such patients are admitted if there is a vacancy or placed on the waiting list and a professional fee charged them unless they can produce a card signed by their family doctor recommending free treatment by the staff. Such patients are expected to pay the hospital bill.

*Third:* as county patients. These patients are sent here at the expense of the counties of which they are residents in accordance with the state law of 1911, a copy of which is appended. The hospital charges the counties \$12.00 per week with additional charges for operating room, x-ray, laboratory work, etc.

*Fourth:* as a free teaching patient. A certain number of patients are admitted free because of their especial teaching value or because of lack of funds and failure to receive immediate hospital care would jeopardize recovery. Emergency cases are often admitted free in this way. Such patients must be a true emergency type or must have the urgent recommendation of a staff member explaining the teaching value of such a case. This group always includes a large number of maternity cases because of their teaching value.



## IMMEDIATE NEEDS

1. Equipment for the new ward building. This cannot be opened until funds are provided for its equipment. Estimated cost is \$70,000.

2. A fireproof building for the colored patients to replace the present barracks building. Can be combined with the following:

3. A Service building at a cost of \$200,000.

The present kitchen, dining room facilities, storage rooms are inadequate. Such a unit will provide—

a. Adequate storage facilities so that the institution can purchase supplies more economically thus particularly providing cold storage which should save the hospital \$6,000 to \$8,000 a year on this item alone.

b. Enlarge the present kitchen and dining room, which should be three times as large for an institution of this size.

c. Enable the pathology department to be moved to the new plant enabling all parts of the school to be on the new site.

d. Provide better quarters for the help in the hospital.

e. A connecting corridor with the other buildings could take the place of a heating tunnel and also provide a colored ward giving the colored patients a fire proof building.

4. Reimbursement for fire loss \$10,000. More than this amount was necessary to reconstruct barracks building following a fire of June, 1927.

5. Additional boilers for power plant. Present power plant is insufficient to heat the ward building. New high pressure boilers at a cost of \$15,000 will have to be added in addition to putting in a tunnel to the ward building at a cost of \$10,000.

6. Convalescent Home. For repairing and restoring old hospital \$15,000.

## ILLUSTRATIONS

1. View of buildings at the old site, the building on the hill being the old laboratory building built in 1906 by Dr. Bell and still in use.

2. View of new hospital showing the nurses' home nearing completion on the left and the ward building on the right.

## CHAPTER 293—Laws of 1911

STATE UNIVERSITY HOSPITAL TO RECEIVE INDIGENT POOR FOR TREATMENT

An Act to provide for the hospital treatment of inmates of county or city almshouses, or of the indigent poor.

*Be it enacted by the Legislature of the State of Kansas:*

Section 1. Inmates of county or city almshouses, or indigent poor in need of hospital treatment, may apply to the board of county commissioners and county health officer, who constitute the board of health of such county, or if, after the recommendation of any reputable physician, in the judgment of such county board of health, hospital treatment would be a benefit to said person, then such county board of health shall issue a certificate stating this fact to the superintendent of the hospital conducted by the regents of the University of Kansas, who shall receive such patient. The county or city shall provide transportation for such patient to such University hospital.

Sec. 2. Upon the admission of such patient, the dean or person in actual charge of said medical school, shall assign such patient for treatment to the surgeons or physicians having such cases in charge, and such surgeons or physicians shall proceed to give the proper attention for such time as in their judgment such patient can be benefited, or until cured.

Sec. 3. The hospital superintendent, or person in actual charge of such hospital, shall keep an account of the medicines and cost of maintenance, and such traveling expenses as are actually necessary to return the patient from said hospital to the place from which said patient came, and shall make and file with the secretary and purchasing agent of the University of Kansas, or other person authorized by the regents of the University of Kansas, an affidavit containing an itemized statement, so far as possible, of the actual expenses incurred at said hospital of said University and of the traveling expenses aforesaid.

Sec. 4. When said affidavit of expenses has been filed with the said secretary and purchasing agent, or other person appointed by the regents of the University of Kansas, he shall thereupon draw a duly verified voucher for the amount thereof upon the city or county from which said patient was sent, and forward the same, together with the affidavit aforesaid, to the authorities empowered by law to allow claims against said city or county, who shall thereupon audit and allow said claim, and the amount thereof shall be paid to the "Regents of the University of Kansas," to reimburse such fund as may lawfully have been drawn upon for such expenditures.

Sec. 5. It is further provided that no compensation shall be allowed to said dean, hospital superintendent, physician or surgeon, or nurse, at said hospital for such surgical or medical treatment other than the salary they respectively receive from the regents of the University of Kansas.

Sec. 6. Whenever any person receiving hospital treatment under this act shall be possessed or shall become possessed of any property, real or personal, the city or county may recover from such person, or his estate, such amounts as have been expended by it for his benefit under this act.

Sec. 7. This act shall be in force on and after its publication in the statute book.

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## Significance of Polyuria and Oliguria

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### ETIOLOGY OF

- | POLYURIA                                         | OLIGURIA                                 |
|--------------------------------------------------|------------------------------------------|
| 1. Diabetes insipidus                            | 1. Renal—primary                         |
| 2. Diabetes mellitus                             | (a) Acute nephritis                      |
| 3. Renal—primary                                 | (b) Nephrosis                            |
| (a) Chronic interstitial nephritis               | 2. Obstruction—urinary tract             |
| (1) Polycystic kidney                            | (a) Neoplasm                             |
| (b) Amyloid disease                              | (1) Benign, Hypertrophied prostate, etc. |
| (c) Tuberculosis                                 | (2) Malignant                            |
| (d) Hydronephrosis—intermittent                  | (b) Stricture                            |
| 4. Nervous                                       | 3. Renal circulatory insufficiency       |
| (a) Central                                      | (a) Cardiac failure                      |
| (1) Epilepsy                                     | (b) Shock                                |
| (2) Hysteria                                     | 4. Nervous                               |
| (3) Headache                                     | (a) Central                              |
| (b) Reflex                                       | Asphyxia, strychnine, etc.               |
| (1) Partial ureteral obstruction, calculus, etc. | (b) Reflex                               |
| 2. Catheterization                               | (1) Renal calculus                       |
|                                                  | (2) Catheterization                      |
|                                                  | (3) Surgery                              |

The normal average daily secretion of urine is estimated to vary from 500 to 1500 cc. Under normal conditions of the kidneys and uniform metabolism the volume of urinary secretion is proportional to the volume of fluid intake. Let this fluid intake vary greatly above or below average levels for a time and it will be reflected in the urinary output as excessive or diminished secretion. Since fluid intake and water metabolism are so inconstant we cannot establish definite levels but must make arbitrary ones, volumes above which are considered as polyurias and below which as oligurias.

A brief review of the physiology of the kidney here seems important. The mechanism involved in the secretion of urine is not known exactly. Until recently the theory of Bowman and Heidenhain and the theory of Ludwig have dominated physiological thought. In 1917 Cushny established the modern theory which holds that the glomerulus acts as a simple filter allowing water and crystalloids to pass through, this filtrate being essentially a deproteinized blood plasma, and the re-absorption in the tubules of those substances necessary to

the body. Excess materials and waste products are eliminated. Richards and his co-workers have recently made comparative analyses of urine taken directly from Bowman's capsule and the bladder of the frog and thus have apparently added proof to Cushny's theory.

Assuming that the tubular epithelium reabsorbs water and those other substances which are essential to life and that under normal conditions the levels of these materials in the blood are essentially constant, then it will be seen that there is a threshold above which the kidney allows each of these materials in excess of their particular threshold to be discarded. Water, even when taken in very large quantities by mouth, causes practically no dilution of the blood plasma, but is very rapidly excreted. The various urinary constituents are all dependent upon water for their elimination. The kidneys can concentrate solids only to a certain point. To eliminate substances above the limit of concentration requires more fluid. Thus substances, normally belonging to the body, may act as diuretics if sufficiently increased in amount. Thus urea has a diuretic effect. Likewise glucose causes a diuresis when excreted by preventing the re-absorption of fluids by the tubules.

If the glomerulus acts as a filter a difference in pressure between glomerular capillaries and Bowman's capsule must exist in order to obtain movement of fluid from blood to tubules. The normal pressure difference which is necessary for a movement of fluids in this direction cannot be measured directly. It has been shown that the proteins of the blood plasma exert an osmotic pressure of 25 to 30 mm. of mercury. Therefore, the pressure in the capillaries must exceed by at least 30 mm. the pressure in the tubules, which normally have a pressure of zero, to assure a flow of fluid into the tubules. Assuming that the glomerular pressure is 20 mm. below that of the main arteries of the body, or approximately 100 to 110 mm., the ureteral pressure may be raised by obstruction to 70 or 80 mm. of mercury before urine flow ceases. Not only must there be pressure but there must also be blood flow through the capillaries for the



continuous movement of fluid.

Alterations of the character of the filter may be produced by influences operating through the blood. Under the influence of deficient oxygen supply the glomerulus becomes much less permeable than normally and, therefore, in asphyxia the secretion of urine is diminished.

The kidney is innervated from the vagus and from the splanchnic. This nerve supply is distributed chiefly to the blood vessels and reaches both afferent and efferent glomerular vessels. We know little of the activity of the vagus. The splanchnic carries both vaso-constrictor and vaso-dilator fibres. Stimulation causing constriction of the vessels, lessens the blood flow through the kidney, and diminishes the amount of urine secreted. When the vaso-dilator fibres are stimulated there results a dilatation of the vessels with increased blood and urine flow. So far as is known this is the only way in which the secretion in the kidneys can be directly affected by the central nervous system.

Diabetes insipidus produces the most profound polyuria, polyurias as much as 44 quarts being reported. Diagnosis is most difficult in cases of polyurias of 3—5 litres. The two conditions most frequently confused with diabetes insipidus are chronic interstitial nephritis in childhood and infection of the lower urinary tract. Hysteria may also prove another source of error.

The pathogenesis of the disease is extremely interesting. Two types of diabetes insipidus are usually recognized: the primary or idiopathic and the secondary or symptomatic, (Rowntree). The primary type embraces hereditary cases, those in which there are negative physical findings, marked functional neuroses and the temporary disturbances, such as are sometimes seen in pregnancy. In the secondary or symptomatic type should be included: 1.—Cases exhibiting organic lesions of the nervous system, (a) tumor or cysts of the hypophysis with characteristic syndromes, with or without neighborhood manifestations—(b) cerebral neoplasms—(c) injuries of the head, particularly fractures of the base of the skull. 2.—Cases exhibiting

a general disease capable of setting up lesions of the brain, (a) through metastases, i. e., carcinoma and sarcoma—(b) through inflammatory deposits, syphilis, tuberculosis, encephalitis, and actinomycosis.

Soon after his observation that puncture in the floor of the fourth ventricle is followed by glycosuria, Claud Bernard found that a similar puncture rather higher in the fourth ventricle causes a marked increase in the urine which remains free from sugar. Eckhard found that irritation of the lower part of the vermiform process of the cerebellum was followed by polyuria in the rabbit, and Bechterew observed that stimulation of the sigmoid gyrus of the cerebrum accelerated the flow of urine and more so from the kidney of the opposite side. According to Cushny, the puncture polyuria appeared to arise from action on the vaso-motor centers controlling the kidney which was either of the nature of vaso-dilator stimulation or of vaso-constrictor depression, or very possibly comprised both of these.

Baily and Bremer have rather recently conducted extensive experiments in which they have produced numerous lesions in the para-infundibular region followed by polyuria. In reviewing the work of Claud Bernard, Eckhard, Bechterew and others they contend that the polyurias which these men produced were temporary and that Cushny was correct in his interpretation of the nervous mechanism of their production. They found, however, that irritations in the post-infundibular region produced polyurias of a more permanent character. Illievitz in this year finds that the consensus of opinion favors the action of the pituitary gland on the kidney in the production of polyuria. Endocrinologists have clung desperately to this view or one involving some pituitary dysfunction. Camus and Roussey, however, have successfully removed the hypophysis in dogs without the production of polyuria, and later have produced polyurias in the same dogs by puncture in the post-infundibular region. It is interesting to note that pituitary extracts, given clinically, are not uniformly effective in the alleviation of polyuria. Engelbach finds that

only about 50 per cent of his cases respond to extracts of the hypophysis. There are those who would ascribe the cause of polyuria to a hormone produced or liberated from the region around the infundibulum. Helen Bourquoin, after recent experimental work, holds to this view which is suggested by the fact that cross transfusions between severely diabetic and normal animals cause a brief diuresis in part of the experiments, a result which was never obtained in cross transfusions between normal animals. We must conclude that the intimate mechanism of diabetes insipidus is still unknown.

Most important clinically is the polyuria associated with diabetes mellitus. It is estimated there are one million diabetics in the United States. Here diagnosis is made easier by the association of glycosuria. If, however, the incidence of diabetes is really increasing there must be at least as many prediabetics, many of which would be found to be actually very mild diabetics if presented for careful examination. In these cases polyuria, though slight, may exist unrecognized and glycosuria may not be discovered if only random specimens of urine be examined. The polyuria of diabetes mellitus is more easily explained. Since the kidney cannot concentrate substances above a certain point the tubules are unable to re-absorb the water and diuresis results. These polyurias are never as extreme as in most cases of diabetes insipidus, their degree being dependent upon the amount of glucose being excreted.

All are aware of how unsatisfactory have been the attempts to correlate histological and clinical observations in kidney disease. Because of the intimate relation of the various parts of the kidney unit there is no pure nephritis. Tubular degeneration is more or less associated with glomerular and interstitial changes. In general where tubular changes predominate there is a diminished amount of urine of a high specific gravity and where glomerular changes are most prominent the urine is increased in amount and at a fixed low specific gravity. Increased urinary secretion is encountered in chronic interstitial nephritis

either of the primary or secondary contracted type. In amyloid disease of the kidney polyuria may be one of the most prominent symptoms, the patient passing large quantities of clear pale urine, with or without the presence of albumin. The deposition of amyloid is first seen in the ulalphigian tufts. In later stages the tubules are affected, chiefly the membrane, and rarely, if ever, the cells themselves. It would seem that the permeability of the glomerulus is affected in these cases, allowing the passage of water but inhibiting the filtration of the solids. Here also should be mentioned the polycystic kidneys. In the polycystic kidney the kidney is converted into many cysts which leave scarcely any of its parenchyma in the normal condition. The symptoms of the disease are usually those of chronic interstitial nephritis. The mere presence of a tuberculous focus in the kidney is said to cause at times no symptoms beyond a slight fever and polyuria, although it is probable there exists an associated tuberculous cystitis.

There are also those conditions which give rise to transient or temporary polyuria. There are nervous influences which are thought to operate through the splanchnic system in a manner already discussed. Bechterew states that the secretion of urine may be altered from the cerebral cortex. This is in accordance with the frequent clinical observation of diuresis after epilepsy, headache, and hysterical excitement. Janet also reports cases of polyuria associated with hysteria, but these were always preceded by a polydipsia. There are other nervous influences which are probably reflex in action. Diuresis from partial obstruction of the ureter has been described in man. In one case Steyrer found that the introduction of a catheter into the ureter caused marked polyuria on the opposite side—a crossed reflex. Prolonged exposure to cold which arrests the sweat secretion leads to increased secretion of urine from the accumulation of water in the blood tissues. Temporary polyurias, often quite marked, are encountered in intermittent hydronephroses.

Oliguria is found in acute nephritis where there are sudden severe toxic in-



fluences and parenchymal degeneration. The most pronounced are those producing marked tubular changes, i. e., bichloride poisoning with oliguria and even complete anuria.

Obstruction along the course of the urinary tract which produces a back pressure in the ureters and kidneys results in a diminished secretion of urine. It has been pointed out that there is normally a zero pressure in the ureters. Ureteral pressure of any degree will diminish the urinary output, and theoretically if raised to a pressure within 30 mm. of the pressure in the renal capillaries may result in complete anuria. The prostatic hypertrophies and neoplasms furnish many of such obstructions.

Under any condition of renal circulatory insufficiency as may result from cardiac failure or from shock three factors are at work which diminish urinary secretion. These are decreased arterial and capillary pressure, diminished blood flow through the capillaries, and insufficient oxygen supply decreasing the glomerular permeability.

Nervous influences may also result in oliguria from either central or reflex stimulation. Scott and Loucks have found experimentally that injury in the region of the colliculi results in the inhibition of renal secretion. Asphyxia and strychnine poisoning cause a general vaso-constriction which involves the kidney and tends to lower the amount of urine secreted. As partial ureteral obstruction has been found to produce polyuria, other urinary tract irritations have been found to produce oliguria, and even anuria. Not infrequently a renal calculus or the introduction of a catheter into the bladder or ureter results in anuria. This difference in action has been explained by a difference in the intensity of the irritation, the former stimulating only vaso-dilator fibres and the latter the stronger vaso-constrictor fibres.

Oliguria is reported associated with hyperhidrosis. Lauros reports such a case in a pregnant woman. Her daily amount of urine was 80-100 cc. with an intake of 600 cc. or more. No pre-eclamptic symptoms were observed.

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### Rabies With Report of a Case

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The comparative rarity of rabies in man is acknowledged, yet the attention of physicians is challenged by the extreme gravity of the disease when once established. Well trained medical men universally acknowledge the proper methods of preventing the disease. A certain amount of mysticism continues to prevail among laymen. Emblematic and religious invocations, including mad stones, continue to be used by people bitten with supposedly or actually rabid dogs, throughout the world.

A number of different names have been used for the disease. Among English speaking people, rabies is employed preferably. Hydrophobia is used especially by laymen. Obviously the name is not a good one. In the French literature, rage is seen most frequently. Lyssa is derived from the Greek word meaning frenzy.

## HISTORICAL

Several ancient writers indicate that the disorder was recognized at a very early period. Aristotle, Hippocrates, Virgil, Plutarch and others mention mad

dogs. Celsus in the first century, A. D., indicates a definite recognition of the disease in the human. Fracastorius, in 1530, writes about the trouble. Zinke, 1804, recognized the possibility of infection from the saliva of rabid animals. No one should neglect the monumental work of Pasteur during the period of about 1884. He showed definitely the particular involvement of nervous tissues, and developed our important method of prophylaxis.

#### PATHOLOGY

Outside of looking for the possible skin abrasion resulting from the bite of an animal, we are attracted to the central nervous system. All veterinarians pay some particular attention to the dog's stomach which frequently contains only foreign articles such as bits of wood, glass and sticks.

The entire central nervous system may be involved. Grossly there is nothing of great importance to be seen outside of mild injections of the meninges and brain. Histopathological changes especially in the central ganglia, Gasserian ganglia and cerebellum are searched for. Some perivascular changes with an increase of endothelial cells, and small round cells, are noted. In the larger nerve cells various degrees of tigrolysis and destruction of the neurofibrillae are seen. Much importance is attached to the finding of the characteristic Negri bodies; more numerous in the hippocampus, substantia nigra, Gasserian ganglia and cerebellum. They are especially characteristic in the larger nerve cells. Their importance for the diagnosis of rabies in all animals is universally recognized. Their exact significance is not so certain. They have been considered both as the cause and the product of the disease.

It is well known that the virus travels along nerve fibers from the skin or deeper abrasions resulting from the bite of the rabid animal. The disease develops in the central nervous tissues after a greatly variable incubation period. There is much less danger of an inoculation if the virus in the saliva be wiped off by teeth going through clothing. The incubation period is shorter if the face or neck region is involved in the bite. Dogs, wolves, coyotes, skunks, cats and many

other animals may have rabies. Even the herbivora and birds are not exempt.

Examinations of the cerebrospinal fluid seldom yield any positive diagnostic findings, excepting occasionally to add in a differential diagnosis. A moderate increase in the pressure is present usually. Seldom is there a definite pleocytosis or increase in the albumin. Nerve or intracerebral inoculations of susceptible animals, with even large quantities of cerebrospinal fluid immediately after removing from the rabid patient, does not produce the disease. Dr. Russell Haden and I tried to inoculate animals from the patient reported below and were unsuccessful. I have met the same fate in three previous cases.

What is the nature of the virus? It is filterable and readily destroyed by chemicals and heat. The Negri bodies may or may not be the causative organism. The average incubation period may be considered as ranging from twenty to sixty days. A very few cases have been reported with periods from seven to fifteen days. There is more uncertainty about the maximum time. Some cases have been reported as coming on one or two years after the inoculation. Possibly patients with such very long incubation periods may have the virus confined in the skin or subcutaneous tissues at the site of the bite, and then only released to travel upwards along the nerves just a few weeks before the actual onset of the trouble.

#### DIAGNOSTICS

In the majority of cases there is obtained readily a history of a bite or injury by some suspected animal. After a careful consideration of the pathology and the many areas of the brain involved, we can comprehend readily why there should be such a variation in the symptomatology including psychic, motor, sensory, co-ordinate and vaso-motor manifestations.

Quite frequently there are some prodromal symptoms for a few days; such as malaise, abnormal moods, undue irritability, insomnia, depressions, hyperesthesia, and peculiar, apprehensive or anxious appearances. Pyrexia ranging from 101 to 105 degrees, and increased pulse and respiration rate are encoun-



tered. Cyanosis may be present on account of spasmodic attacks and palsies of the respiratory muscles. There may or may not be drooling of the saliva. The so-called fear of water gave rise to the term hydrophobia. Frequently there is anxiety and possibly excitement because the patient has the great desire to drink water, but is unable to swallow. Various types of palsies may appear in the later stages. The deep reflexes may be increased or abolished. The hyperesthetic patient often is annoyed by noises, various necessary attentions, bright lights and either active or passive movements. I recall a three-year-old child with the agitated type of rabies, who was exceedingly sensitive to the slightest noises, and at times would go into paroxysms on hearing the distant rumblings of the street car two blocks away. Varying psychic manifestations including delirium and stupor are seen frequently.

Based on neuropsychiatric observations, rabies has been divided into two groups, namely the furious and dumb. I would suggest a division of three, designated agitated, stuporous and irregular.

1. In the agitated group we have abnormal psychomotor conduct represented in the various excessive activities. The patient may be delirious more or less continuously, or exhibit spasmodic periods of excitement during which time those in attendance might be injured. The spasmodic attacks can continue for a few or many minutes. They may be precipitated by various extraneous stimuli.

2. The stuporous group have a gradual obtunding of consciousness after the prodromal manifestations. In the earlier stages the patient may be able to swallow, but not in the later. Various palsied states are seen.

3. An irregular group would include a goodly percentage of all the cases. Some show little or no psychic manifestations. Full orientation and consciousness may be retained almost to the time of death.

For the differential diagnosis might be mentioned lyssophobia, meningitis, encephalitis, tetanus and toxic states with delirium.

Have the suspicious animal closely observed by a veterinarian or pathologist. As a rule a period of one to four days is adequate. If the dog is killed, send the entire head to the pathologist as promptly as possible. Decay in hot weather makes it more difficult to search for the Negri bodies. Examine the stomach contents for possible pieces of wood, sticks and glass.

#### PROGNOSIS

The idea has prevailed for many years that rabies is always fatal. The very few cases of recovery reported in the literature might be construed as proving the rule. You are entitled to doubt these reported cures. I have observed one case with mild multiple plegias, emotional imbalance and a mild psychic impairment, that had a rather definite history of having been bitten by a rabid dog and having passed through the acute illness himself. We were not able to check up on the acute illness occurring some six months previously.

#### TREATMENT

The above prognosis leaves as the only duty of the physician to make the patient comfortable and render symptomatic aid. Bromides and chloral should be given in fairly large doses by mouth as long as the patient is able to swallow. Otherwise use the drugs per rectum. A very quiet, dark room affords some relief. Use an ice bag on the head. Some restraint may be required.

Early prophylaxis along the lines originally devised by Pasteur is exceedingly important. While only about 8 to 20 per cent of all the cases bitten by diseased animals are potentially rabid, yet the almost uniform death rate makes it imperative for the physician to always advise a course of treatment at once.

The rabies vaccine is so well known that possibly further detail seems unnecessary. Formerly twenty-one daily graduated injections were given. Now fourteen day courses of treatment have been placed on the market by several large pharmaceutical firms. Early prophylactic treatment has reduced the death rate to something less than one-half of one per cent.

With most of the trouble resulting from bites by rabid dogs, we should en-

deavor to stamp out the disease in this animal if possible. Some countries have been able to almost eliminate rabies by destroying stray dogs and muzzling others. Today the best method is to have homeless dogs cared for, and require the owners of all others to immunize against rabies. Following the work of Umeno and Doi it is now possible to immunize dogs with one injection. Thereby immunity is established for one or more years. It is reported that certain parts of Japan have eliminated rabies by making this method of immunization compulsory.

#### CASE REPORT

Miss N. L. S., white, age 18 years, was admitted to the Bell Memorial Hospital on March 13, 1927, with the information of nervousness, delirium, and high fever. Dr. J. N. Foster had referred the patient with the diagnosis of rabies. Family and past history was negative.

The patient worried since November 13, 1926, at which time she was bitten through the stocking on the left ankle and foot by a rabid dog, lest she would develop the disease. Three of the other younger children also were bitten at that time by the same pet dog. The 14-year-old sister had a deep, direct bite on the right thigh and on the left ankle through the stocking. A 10-year-old brother had wrist scratches from the teeth. The 4-year-old sister was bitten slightly on the right cheek.

The father started to take the dog to the Kansas City, Kansas, Health Department, but on the way unfortunately was directed to the Humane Society. Some one at the latter place said the dog was poisoned. The same statement was given four days later when the animal died. They directed the family not to take prophylactic treatment for rabies.

For about ten days prior to admission to the hospital, the patient complained of some pain in the left leg and had been "more nervous" than previously. The first irrational symptom appeared March 10. During the night of March 11, the patient became very wild and irrational again. She bit the father and mother on the hands. Most of the symptoms increased rapidly. Swallowing became impossible.

Examination—The girl appeared well developed and in a fair state of nutrition. The head was tossed from side to side and arms thrown about. She muttered incoherently most of the time but occasionally could make herself understood. The pupils were widely dilated, and reacted sluggishly to light. The lips and skin were cyanotic. There was a definite drooling of saliva from the mouth. The irregular respiration was rapid and rather shallow. The heart sounds were faint, rapid, but regular, 120 to 160 per minute. The blood pressure registered 102/78. Temperature registered between 105 and 106 degrees F. A scar was found on the inner dorsal aspect of the left foot. Any passive movement of an extremity always produced a striking general spasmodic reaction. The upper deep reflexes were sluggish and lower about absent. The Babinski, Oppenheim, Kernig, and Chvostek's signs were negative. No opisthotonus. The blood count gave 16,400 w.b.c., 77 per cent polys, 9 per cent large, 10 per cent small, 1 per cent eosinophiles, and hemoglobin 96 per cent.

The treatment consisted of chloral hydrate gr. xv, sodium bromide gr. xxx p.c. hyoscine gr. 1/100, as indicated, formatone gr. xxx, and a spinal puncture.

With the certain diagnosis of rabies, an absolutely bad prognosis was given. The patient declined quite rapidly, and developed a striking type of facies as if in fear. Exitus occurred on the day following entrance to the hospital.

An autopsy was permitted but limited to the head. An abstract from the pathologic report of Dr. H. R. Wahl follows:

"The brain, pituitary body with both Gasserian ganglia were removed. The dura was slightly adherent and the brain showed the usual congestion but no other important gross findings.

"Section through the meninges shows some congestion. The cortex of the brain shows some congestion around some of the blood vessels and occasionally deep eosin staining bodies in the cytoplasm of the ganglion cells or in the main branches. The vessels in the cortex are considerably congested. A few lymphoid



cells may be seen here and there in and around these vessels.

"Section through the Gasserian ganglion shows unusual cellular infiltration in the tissue between the ganglion cells with swelling and proliferation of the sheath cells often at the expense of the ganglion cells themselves. Mononuclear cell infiltration is also abundant about these cells.

"Section through the cerebellar cortex shows relatively few large cells, nothing otherwise abnormal is noted though there was considerable vacuolization.

"ANATOMICAL DIAGNOSIS—Rabies, Negri bodies in large ganglion cells—neurophagocytosis of Glasserian ganglion (von Geheuchten-Nelly phenomenon): Cerebral congestion: hypertrophy of the anterior lobe of the pituitary gland."

#### CONCLUDING REMARKS

In reviewing the above reported case there are a few interesting facts of which we might take particular cognizance. The patient did have a tendency to fight those in attendance, which is much less common in human rabies compared with the rabid dog.

The incubation period was rather long. The lesion was about as far distant from the brain as is possible. The general rule is for a longer incubation period with such a state.

In particular would I like to call your attention to the fact that the father had consulted promptly the city health physician of Kansas City, Kansas, relative to the possibility of the dog in question being rabid. That he was given proper advice by Dr. S. D. Henry, both relative to the proper care of the dog and the wounds. On the way to the City Hall with the dog, he encountered some irregular advice and took the dog to the Humane Society where he was poorly directed. In fact many scientific men might place the blame of the death of this girl upon the shoulders of the officers of the Humane Society.

If our information be correct, then they should be severely condemned in view of the positive knowledge we have relative to rabies and the splendid achievements by prophylactic methods.

### The Treatment of Eczema in Infants

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Eczema usually occurs in infants between three weeks and six months of age, appearing as a bilateral, symmetrical, catarrhal dermatitis. In the majority of cases it is a manifestation of protein sensitization. In a few cases particularly in older children it may result from local irritation or because of an unusually sensitive skin.

Although nearly all cases of infantile eczema may have their origin in sensitization to certain foods, the skin manifestations may present several variations. It may appear as a circumscribed, inflamed, rough patch on both cheeks with little tendency to spread. If the skin is not sensitive the surrounding areas will be normal. In the sensitive skin the eczematous patch will not be clearly defined and a slight papular eruption may be present over the head, neck, shoulders and trunk, especially in the flexor surfaces. This type is most stubborn to treatment.

The seborrheic eczema starts on the scalp as a fine dry scaly condition and spreads to the face. A long standing subacute type is characterized by induration and erythema. In the over-fed or fat infant the moist, oozing type of eczema is occasionally encountered. Very often a staphylococcus infection becomes implanted on the dermatosis resulting in what is termed, pyogenic eczema.

Many classifications of eczema are made, all more or less arbitrary and overlapping. The important point in the management of the disease is to recognize the fact there are several kinds of eczema, that certain cases require different treatment, and that in a given case the treatment may have to be changed from time to time to suit the varying conditions. The treatment of eczema is very discouraging if the parent expects to get a prescription for some ointment to cure the disease. There are few diseases in which the patient shops about more from one physician to another, and in which the treatment is changed so often. It is because of the difference in the etiology, the sensitiveness of the skin, the stage of the disease

and the possible degree of infection that makes one case different from the other and the out-come so uncertain.

If it were possible to determine accurately the food causing the disturbance the treatment would be very much simplified. Occasionally we are able to get some clue in the history of food upsetting the baby. I have seen cases in which egg was vomited every time it was given to the baby. If such an infant had eczema it would be good evidence, but not proof that egg protein was responsible.

In most instances the cutaneous tests are useless, due either to the fact that no reaction occurs or to the fact that multiple reactions occur. In an infant with extreme irritability of the skin, pseudo-reactions to every scratch are obtained and this may render the protein tests useless. In those cases in which clear reactions are obtained it has been found that the cutaneous tests will be positive long after the specific food had been eliminated from the diet. Again we may get reactions to proteins that have no part in the causation of the eczema.

In cases where definite reactions have been obtained and this information supported by therapeutic tests, certain foods stand out prominently as sensitizing agents, viz., cow's milk, egg and wheat. On general principles therefore, we should consider eliminating or modifying in some manner these three food-substances.

The quantity of the food consumed is of importance in some instances. The child may be able to take limited amounts of certain proteins without trouble but when the tolerance is exceeded eczema appears. The dermatosis may be due to a maladjustment between the protein ingested and the infant's digestive capacity—a lowered digestive capacity being attended by skin disturbances. Such a lowering, for instance, occasionally occurs during the period of difficult dentition and is commonly referred to as a teething rash.

Before undertaking the treatment of a case of eczema it is well to learn exactly what foods the child was taking when the disease started, and everything that was done for the patient. Sometimes we can elicit the information that the disease

appeared soon after cereals were started, or perhaps that one kind of cereal makes the condition worse. Sometimes a greasy ointment acts as an irritant and we may learn that some form of medication caused an exacerbation of the rash. It is also desirable to learn whether the condition is worse on cold days or on warm days, or whether going out-of-doors has any influence on the disease.

The nutrition of the child must also be considered. If the nutritional state is much below par it is well to feed the patient with a view of improving the nutrition regardless of the effect on the skin. This may result in a temporary exacerbation of the lesions, but as the general condition improves the skin nutrition and resistance improves. The moist type of eczema is likely to be present in an over-fat infant and in such a case the food, especially the fluids should be restricted.

If the infant is on a food high in sugar, such as condensed milk mixtures, or a high fat food consisting of top-milk mixtures, it is a good plan to lower the sugar or the fat as the case may be. The eczema may not be due to either of these elements but it is only by trial and error that we determine this. If the baby is getting large amounts of milk, that is, more than a quart each day, this should be reduced and more solid and concentrated foods given. Very often the baby will prefer cream-of-wheat to oatmeal and take large amounts of it. If eczema occurs in such a baby, oatmeal should be substituted. Or if the baby is getting large amounts of oatmeal, cream-of-wheat should be substituted. Skin tests should be resorted to in obscure cases and occasionally they give a valuable lead. It must be remembered, however, that a positive test may result long after the specific protein has been eliminated. There is no need to test for foods that have been removed empirically.

When the baby is on cow's milk mixtures it is difficult to make a change in the food. Sometimes goat's milk can be resorted to with benefit. Kerley recently emphasized the fact that prolonged cooking renders the protein of cow's milk less sensitive. In a case of eczema that proved intractable to all other changes in



diet he boiled the milk with cereal six hours, and without any other change in the food or local treatment, this brought about a rapid cure.

Recently it has been found by experimental studies on the skin of rabbits that there is a relation between the calcium and potassium content and the irritability of the skin, the former being low and the latter high. It has been suggested that calcium be given intravenously in eczema.

#### LOCAL TREATMENT

All local irritation should be removed. In an infant with facial eczema and a papular dermatitis over the body the possibility of irritation from the clothing should be considered. Both silk and wool have been found irritating. Before local treatment is begun the skin should be freed from crusts as much as possible. This may be accomplished by olive oil or cold cream. Soap and water should not be used. It is very important that scratching be prevented and some mechanical appliance to restrain the arms usually is necessary. A cuff around the elbow made by sewing the ordinary tongue blades in muslin is serviceable, as also are the globular aluminum mitts that are on the market.

For the first 24 hours, boric acid compresses kept moist, serve to loosen the crusts and are mildly antiseptic and antipruritic. After this for a mild erythematous eczema, the following lotion may be applied.

|                          |           |
|--------------------------|-----------|
| Boric acid .....         | 15 grains |
| Bismuth subgallate ..... | 30 grains |
| Glycerin .....           | 10 min.   |
| Camphor water .....      | 1 oz.     |

This will also be found useful in the vesicular eczema with much oozing. If itching is present, phenol, 5 min., should be added. After using the lotion a few days or when the oozing becomes less marked, Lassar's paste is beneficial.

|                  |         |
|------------------|---------|
| Zinc oxide ..... | 2 drams |
| Starch .....     | 2 drams |
| Vaseline .....   | 1 oz.   |

Lassar's paste may serve as a base for several drugs. For the soothing effect phenol, 10 grains, and menthol, 2 grains, may be used in each ounce of the ointment. Resorcin, 10 grains to the ounce, makes an effective antipruritic ointment.

For the long standing, indurated, itching eczema so commonly encountered,

one of the following keratolytic ointments is advised:

|                      |           |
|----------------------|-----------|
| Crude coal tar ..... | 1 dram    |
| Lassar's paste ..... | 1 ounce   |
| or                   |           |
| Salicylic acid ..... | 10 grains |
| Lassar's paste ..... | 1 ounce   |

In the ordinary simple facial eczema confined to a patch on each cheek, the 2 per cent salicylic acid in Lassar's paste is cleaner, but in the more severe types the crude coal tar is preferable.

The eczema mask is a most useful and the most neglected adjunct. If it were used faithfully in eczema of the face and head the treatment of this disease would not be so disappointing. I do not believe the tar ointment should be covered by a mask nor should it be applied to large areas of the body because there is some danger in its absorption. The salicylic ointment covered with a mask will often give surprising results.

If the scalp is involved with a seborrheic eczema, 1 or 2 per cent resorcin in vaseline, or the salicylic acid ointment covered by the infant's hood day and night is serviceable.

Butesin picrate ointment covered continuously by a mask is of benefit in itching forms of eczema. The mask is made from a cloth in which holes have been cut for the mouth, nose and eyes and is applied to cover snugly the face and head, and tied behind the neck.

For intense itching that is not relieved by local applications 2 to 5 minims of a 1-1000 solution of epinephrin hydrochloride should be given intramuscularly or subcutaneously.

When there is evidence that a pyogenic infection is superimposed on the eczema it is well to overcome this by the use of a 3 to 5 per cent ammoniated mercury ointment for a few days before applying the eczema ointments.

When it becomes necessary to cleanse the skin during the treatment, olive oil on gauze should be used, and about once a week, when it becomes necessary to remove some of the grease or oil, the gentle application of cloths moistened with a solution of boric acid or a teaspoonful of borax in a pint of warm water can be used.

## Generalized Senile Pruritus

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By generalized senile pruritus is meant an affection of the sensory nerve endings of the skin characterized by itching, formication and other parasthesias, in individuals past fifty, who have no demonstrable external changes in the skin, and who are free from metabolic or infectious diseases.

Like many other skin diseases of unknown origin, senile pruritus has been classified as "neurosis." The "neurosis" concept has become very popular largely because patients who present the above symptoms are frequently suffering from senile mental changes and at the same time show normal physical and chemical blood findings.

Any physician who has ever treated patients with generalized senile pruritus will readily appreciate any practical suggestion as to the relief of these unfortunates. These patients are frequently made so miserable by the more or less continuous itching that they can not sleep nor eat. Inability to sleep brings physical exhaustion. Anorexia causes loss of weight. The old age in combination with the above-mentioned factors frequently lead the doctor to suspect that they are suffering from a neoplasm. This is strikingly illustrated in the case here reported.

A study of twenty-five cases over a period of four years has enabled me not only to remove the label of "neurosis" from senile pruritus, but also to work out a practical way of relieving these patients.

Biopsies obtained in the above cases revealed the following histological changes:

Flattened or completely disappeared papillae; a marked decrease in the fat and elastic tissue as well as colloid degeneration of the latter; thickening of the intima of the capillaries with an almost complete obliterative endarteritis.

Such anatomical changes are in themselves sufficient to cause pruritus by interfering with the proper nutrition of the cutaneous nerves together with a loss of the protection afforded normally to

these nerves by the cushion of fat and elastic tissue. These poorly nourished and exposed nerve endings are naturally more easily stimulated by external and internal stimuli.

A removal of the external stimuli such as baring the skin and covering it with protective ointment has not resulted in any improvement. I was, therefore, forced to search for some possible internal stimuli as a factor in causation of the pruritus.

A number of experiments with different drugs and foods suggested a possibility of a disturbance in the protein, sodium chloride and calcium metabolism. Without going into the experimental details in this preliminary report, suffice it to say that all the cases studied obtained either marked relief or complete cessation of their pruritus in from forty-eight to seventy-six hours after being put on a low protein, sodium chloride free diet plus the addition of calcium. This clinical improvement occurred in spite of practically normal blood chemical findings. This apparent discrepancy, however, can be explained, perhaps, by the fact that the abnormally irritated nerve endings due to the degenerative changes in the skin are stimulated by solutions of even normal amounts of protein end products and sodium chloride. As to the effect of calcium, it is a well-known fact that calcium decreases the irritability of nerve tissue.

The following case will strikingly bring out the above facts. This patient was a laborer, sixty-five years old, and complained of generalized itching as well as a sensation of worms crawling over his face, arms and legs. He also complained of weakness, loss of seventeen pounds of weight, and vomiting. Several internists have diagnosed his condition as carcinoma of the stomach. His physical examination reveals the following:

A complete physical examination was essentially negative except for a few infected teeth and an accentuated second aortic sound.

Laboratory Examination: Urine, spec. grav., 1.020. Albumin, negative. Sugar, negative.



Blood: Hemoglobin, 45 per cent; R.B.C., 3,520,000; W.B.C., 7,750; Wassermann, negative.

Blood chemistry: Sugar, 80 mgms. per 100 cc of blood; urea nitrogen, 10.74 per 100 cc of blood; non-prot. nitrogen, 28.4 per 100 cc of blood; sodium chloride, 480 mgms. per 100 cc of blood.

Gastric analysis: 40 cc of secretion reveals free acid, none; combined acid, 20; lactic acid, none; blood, none.

x-Ray of stomach revealed no pathology.

A section of skin taken from the back between the scapulae revealed a complete absence of skin papillae, colloid degeneration of the elastic tissue, thickened capillary walls, and perivascular infiltration with small lymphocytes.

Because of the practically normal physical findings, I attributed all his symptoms to the pruritus, and proceeded to experiment with different drugs in order to relieve this condition. As the drugs tried were of no avail I began to try different combinations of diets. After much trial the diet found most effective consisted of a quart of milk, green vegetables, butter fat, fruits, and no sodium chloride other than that normally found in these foods. Forty-eight hours after this diet was started the patient obtained relief from his pruritus. The formication persisted. Since calcium is known to decrease the irritability of nerve tissue, I decided to try calcium in the form of calcionates in doses as high as 180 grains a day. Three days later the latter symptom had practically disappeared. This patient has gained fifteen pounds in weight. He has not vomited any more and states that he feels better at present than he has felt in the last five years.

#### SUMMARY

1. A study of twenty-five cases of senile pruritus has revealed that this is a distinct clinical entity.

2. That senile pruritus is due to two factors: degenerative changes in the skin together with an abnormal stimulation of nerve endings by the protein end products and sodium chloride.

3. Almost complete relief can be obtained by putting patients with senile pruritus on a lacto-vegetarian diet rela-

tively free from sodium chloride, and large amounts of calcium.

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#### Bacterial Food Infection—Report of an Epidemic in Kansas City Kansas

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Since 1888 medical literature has contained accounts of attacks of acute illness following the ingestion of impure, adulterated or infected foods. These outbreaks have been designated by a varied and confusing terminology. The terms ptomaine poisoning, food poisoning, food intoxication and food infection have been used indiscriminately and interchangeably. In view of this fact and for the sake of clarity in the following discussion a classification is offered using the terminology established by long usage but giving to each term a definite etiology excuse for its existence.

The classification, which suggests itself, is as follows:

1. Food Infection—This group includes all those cases of acute illness following the ingestion of food which can be shown to be due to a bacterial infection. Organisms responsible belong for the most part to the paratyphoid-enteritis group and include the paratyphosus B, the bacillus enteritis, the bacillus supestifer and the bacillus aertrycke.

2. Food Intoxication—The group of food intoxications include all those cases resulting from the ingestion of food containing preformed bacterial toxin, the illness being caused by these toxins. The outstanding example of this group is found in botulism.

3. Food Poisoning—The term food poisoning should be restricted for use in those cases due to chemical poisoning. This usage will include potato poisoning, fish poisoning, metallic poisoning from cooking utensils.

4. Ptomaine Poisoning—The ptomaines are complex toxic bodies present in decaying animal tissue. Recent investigation has thrown much doubt upon the question of their toxicity and since this the diagnosis of ptomaine poisoning is in all probability always a mistake in favor of one of the other forms mentioned above, the use of the term should be discontinued.

The role of bacteria as the etiologic agent in certain cases of food poisoning was definitely established by Gaertner in 1888. In an outbreak in Frankenhäusen where more than fifty persons became ill after eating of the flesh of a cow slaughtered because it was suffering from enteritis Gaertner isolated an organism which he named *Bacillus enteriditis*. Since then many outbreaks have occurred in Europe, Great Britain and the United States most of which have been very inadequately studied as to etiology.

That organisms belonging to the paratyphoid-enteriditis group are responsible for an overwhelming majority of food infection outbreaks has been well established since Gaertner's study in 1888. In a few instances, however, the established etiologic agent has not been found and other organisms have been described as causative. Since the prevention and control of these epidemics depends primarily upon a complete knowledge of all the causative organisms it is of greatest importance that a careful laboratory examination should be made in each instance and the aid of Public Health and state boards of health laboratories should be enlisted to this end.

On February 17, 1927, following a luncheon consisting of chicken patties, au Gratin potatoes, apple salad, apple jelly, gravy, hot rolls and butter, ice cream and cake some one hundred and fifty persons became acutely ill. Three of these were desperately sick and one recovered only after two weeks of hospital care. There were no deaths.

The symptoms came on after a definite interval of from four to four and one-half hours. Chilliness, headache, dizziness, nausea, vomiting, diarrhoea and muscular cramp were present in all cases. The febrile reaction varied from 99 degrees Fahrenheit to 102 degrees Fahrenheit and the pulse ran from 90 to the minute to 120. Severe prostration was an outstanding feature of several cases. The stools were at first semi-formed rapidly becoming watery. There was tenderness upon deep pressure over the epigastrium.

Specimens of the food served at the luncheon were sent to two different chemical laboratories for analysis. Neither of these were able to find the slightest trace of chemical contamination of the material. The results of these tests together with the definite interval between the ingestion of the food and the onset of symptoms lead us to believe that we were dealing with either a food infection or a food intoxication. With this in mind we procured a specimen of each article of the food and began a series of bacteriological tests.

All tests were carefully controlled and only standard methods of procedure were used throughout. Three organisms were isolated in pure culture. Two of these were identified as *B. coli communior* and *B. coli communis* and were dropped from further consideration as etiological suspects. The third organism proved an interesting find.

This organism was a Gram negative rod, motile and flagellated. It liquified gelatin, fermented dextrose, sacchrose, maltose and mannite but did not ferment lactose. Casein was precipitated and dissolved, indol was formed and the nitrates were reduced. A putrefactive odor was apparent when the organism was grown on a protein media.

In order to establish the above organism as the etiologic agent it was necessary to isolate it from the discharges of the persons affected and to reproduce the disease in animals with the recovery of the bacillus from the discharges of these animals. Stool specimens were obtained from five of the persons convalescent from the illness. The organism was recovered in pure culture from two of these. A forty-eight hour milk culture of it was then fed to two cats. Both of these animals developed a gastro-enteritis with vomiting and diarrhoea and the organism was recovered from the intestinal discharges in pure culture. Control animals fed on the sterile milk alone remained well.

The organisms described and identified as the *B. proteus vulgaris* we believe was undoubtedly the causative agent in our outbreak of food infection. The isolation of this organism in this connection at this time is of especial interest in



view of the fact that most literature of recent date and practically all modern text books contain statements expressive of doubt as to its pathogenicity in these epidemics. These statements vary from expressions of doubt to positive denials and are for the most part indicative of the fact that very little careful bacteriologic investigation has been carried out in a large majority of these outbreaks. Undoubtedly the great majority are due to infection with members of the paratyphoid-enteritidis group but we feel that we have definitely re-established the *B. proteus* as causative in some instances at least.

The treatment should begin with an immediate gastric lavage. Those patients who were subjected to this procedure early recovered noticeably more rapidly. Cathartics should not be given before the stomach is emptied because of the danger of carrying the toxic material into the intestine where absorption takes place much more rapidly than in the stomach. Opiates by retarding elimination and locking the toxic material up in the bowel delay recovery.

#### SUMMARY

*B. proteus vulgaris* was the etiologic agent in our outbreak of food infection.

The need for a commonly accepted terminology as applied to the attacks of acute illness following the ingestion of food is evident from a review of the literature on the subject. A classification is offered.

The use of the term ptomaine poisoning should be discontinued.

Outbreaks of food infection should receive more careful laboratory investigation.

The best treatment is immediate gastric lavage.

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### **Lumbar Puncture as a Diagnostic Aid in Brain Abscess**

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The indiscriminate use of the lumbar puncture needle has brought about enough casualties to make us realize the hazards of the procedure. At present this conservatism has stood in the way of a very important aid in the diagnosis of brain abscess. Unlike such conditions

as cerebrospinal syphilis, encephalitis, poliomyelitis, etc., where the spinal fluid findings give merely additional clinical evidence of the presence of the disease and have slight therapeutic values, in brain abscess the spinal fluid may, and frequently does, give the only positive evidence of an active infectious process within the brain.

As a therapeutic measure lumbar puncture may be of great value in some cases of brain abscess if done at the proper time. (See Case 1.) We hear a great deal and see very little of the patient whose cerebellum settles into the foramen magnum and who promptly expires following a lumbar puncture.

Lund<sup>1</sup> states that lumbar puncture is always justified as a diagnostic measure in brain abscess. As for the dissemination of intracranial infection and the production of a diffuse meningitis, that is, I believe, a greatly over-rated impression.

In my work with brain abscess the spinal fluid findings have been the only positive means of making a diagnosis in some cases, and, in those tragedies where brain abscess was not even thought of until after the death of the patient, (See Case 5.) I feel that the lumbar puncture might have been the means of saving the life of the patient.

I believe a lumbar puncture is justified in those cases where we suspect a brain abscess, even though the patient may have a diffuse otitic meningitis. The following are a few typical examples of the value of lumbar puncture in the diagnosis of brain abscess.

Case 1.—J. G., a printer, was admitted to Isolation Hospital with a chronic discharging ear of twenty years duration. He was semiconscious, had a stiff neck, a bursting headache, dilated fixed pupils and a fever of 104.6°. I showed him to the students as a hopeless case of otitic meningitis, as the spinal fluid contained 3000 cells and many streptococci. To my surprise the temperature dropped to normal following the puncture, and four days later another puncture revealed 200 cells and no organisms. I suddenly realized that I was dealing with a brain abscess which I located in the middle cerebral fossa and drained through the

mastoid process. The recovery was slow, but uneventful, and after six months the patient is well and at work.

Had this patient not received a lumbar puncture I do not believe that he would have shown the frank symptoms of a brain abscess, and, of course, the abscess would have been masked by the presence of the meningitis. As a therapeutic measure it was also of great value.

That an extremely high cell count and a very serious condition of the patient does not warrant the diagnosis of a hopeless diffuse meningitis is also indicated by the following history:

Case 2.—J. H., a carpenter, fell twelve feet from a scaffold, alighting on his buttocks, and was momentarily unconscious. He felt no discomfort at the time, and helped to remove his partner who was more seriously injured. He went home, however, and the following day had a profuse epistaxis, and his wife noticed that he bled a little from his left ear. He did not return to work, but two days later took an extensive motor trip and was gone six days. On his return he seemed very sluggish in his movements and was very slow mentally. At this time he developed a right ear ache and the drum was incised with free discharge. One week later he became unconscious and had several severe vomiting attacks which were followed forty-eight hours later by fifty-two convulsions. A lumbar puncture revealed a cloudy spinal fluid with moderate pressure, and no demonstrable organisms either by smear or culture. A cell count was not made.

Quite naturally the family physician diagnosed non-epidemic meningitis. To the surprise of all he began to improve, the temperature, which had been as high as  $106^{\circ}$ , came down to normal. His pulse rate was 48. He had no more convulsions and began to eat and regain his strength.

The picture of brain abscess was so clear cut at the time I saw him that I did not do a lumbar puncture. However, with repeated explorations I was unable to locate the abscesses, which the necropsy showed were multiple, and involved both the anterior hemispheres of the brain. The abscess on the right side

had ruptured into the ventricle producing a diffuse meningitis.

As the necropsy showed, it was a hopeless case from the onset, yet it clearly shows that the patient may recover from the primary meningitis, and that hope should not be abandoned on account of the unfavorable spinal fluid findings.

Case 3.—Mr. A., a bank clerk, was seen at St. Luke's Hospital on account of a bursting headache, chills, and fever of  $104^{\circ}$ , and 740 cells in his spinal fluid. Repeated punctures failed to show any organisms. Due to the x-ray and local findings in the nose, I decided to uncover the dura adjacent to the sphenoidal cells. This was done and an extradural abscess was uncovered. Recovery was prompt and uneventful. The spinal fluid findings were the only positive evidence of intracranial infection.

Case 4.—Mrs. D., age 52 years, was seen at St. Luke's Hospital. She had had an intermittent discharge from her left ear since infancy, but had never been acutely ill until five weeks before entrance to the hospital, when she had fever, some difficulty in walking and severe frontal headache. She apparently was recovering from this attack when, three days prior to her admission, she suddenly developed a violent occipital headache, a stiff neck, and a complete paralysis of the right side of her face. This she had never had before. She had no pain in her ear. She had involuntary micturition, a pulse rate of 90, a temperature of  $103^{\circ}$ , and complained bitterly when her head was lifted, as her neck would not bend. A lumbar puncture revealed 4000 cells. The following day there were 1155 cells, smears showing no growth. Blood culture showed a luxuriant growth of streptococci. A diagnosis of brain abscess was made, and the abscess was located and drained in the right cerebellum beneath the posterior fossa. The patient died twenty-four hours later, and at autopsy the abscess, measuring  $2\frac{1}{2}$  cm. in diameter, was found immediately adjacent to the inner table under the lower third of the mastoid process.

The age of this abscess is difficult to determine, but it is probable that this lesion would have been diagnosed prior



to the onset of the diffuse meningitis had a lumbar puncture been made. Before admission to the hospital her complaint had been interpreted as "heart trouble."

Case 5.—Mrs. M. C., age 33 years, consulted me on account of a foul discharge from her right ear since scarlet fever at three years of age. A radical mastoidectomy was done, and the recovery was apparently uneventful, except for fainting attacks, which I attributed to a hysterectomy which she had had twenty months prior.

To my surprise and chagrin, six weeks following the operation she suddenly had a severe convulsion, developed a fever of 106° and died twenty-four hours later without regaining consciousness.

There was no autopsy to confirm it, but I am positive that she had a brain abscess which ruptured into the ventricle. Early lumbar puncture, which was clearly indicated, would have forced the recognition of an intracranial infection.

There are, of course, contra-indications for lumbar puncture in brain abscess, but fortunately when the contra-indications such as in cerebellar abscess are present, the diagnosis is so obvious that lumbar puncture is unnecessary as, for example:

Case 6.—Goldie E., age 11 years, was brought to Mercy Hospital on account of a bursting headache and vomiting of two weeks duration. Three years before she had had a frank mastoiditis with posterior swelling, but had not been operated. As she came into the door of the Out-Patient Department, Miss Anderson, the nurse in charge, diagnosed her condition as cerebellar tumor. This was on account of the fact that she fell forward while walking and had extreme photophobia. Operation revealed a badly infected mastoid process, a large extradural abscess and a complete necrosis of the inner table, a subdural abscess lying directly beneath the sigmoid draining about three drams of pus, and a large deep cerebellar abscess, which later found its way to the catheter which was inserted. The recovery has been complete, and she has been advanced a year in her school work. It would have been

foolish to have done a lumbar puncture in this case.

On patients who are comatose, on account of the extreme intracranial pressure and where the diagnosis is made very late, lumbar puncture may be contra-indicated, as the sudden alteration in intra-cranial pressure may be enough to rupture the abscess into the ventricles. For example:

Case 7.—Miss M. T., age 21 years, was admitted to Isolation Hospital with measles. She developed a left supra-orbital swelling of the soft tissues, which broke down and was drained. The chief points of interest in her progress were that she had frequent urinary incontinence, was quite vulgar in her remarks to the nurses and had a mild left suppurative otitis media.

Three weeks later, and after she had been up and about the hospital for several days, she suddenly became unconscious, had a shallow slow respiration, with a regular full pulse of 50, and could not be aroused. There was no question that this patient had a brain abscess, but on account of the discharging ear, and the suppurating frontal sinus, and no localizing signs, the problem was to locate the abscess. Lumbar puncture in this case could have been of no service and, due to the serious condition of the patient, might have done harm.

A large brain abscess in the left frontal lobe was evacuated and the patient made a prompt recovery, and has been entirely well for four years.

I have intentionally left out the differential cell counts in the spinal fluid, for, while we know that acute primary meningitis shows a preponderance of polymorphonuclear leukocytes, and a more protracted inflammation such as an abscess often shows an increase in mononuclear cells, yet the exceptions are so frequent as to make this an unsafe rule.

As Lund<sup>1</sup> has so clearly shown in his monograph on the complete study of fifty-four cases of brain abscess, "The spinal fluid may at any moment show any figure whatever from a very few cells to the opaque fluid, yet the most frequent finding is a slightly turbid fluid." As the location and stage of the

inflammation varies, so does the cell count.

To me, the value of the lumbar puncture in brain abscess has been, first, to determine the presence of an intracranial lesion; second, to correlate the intracranial symptoms with the varying cell count; third, to determine the presence or absence of bacteria; fourth, as a temporary therapeutic measure.

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### Post-Operative Comfort in Rectal Operations

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The post-operative course in most ano-rectal cases can be made relatively comfortable. The generally accepted belief among the laity that such operations are of necessity an excruciatingly painful ordeal has been fostered by many who do ano-rectal surgery without a thought for post-operative comfort. To the busy surgeon this may seem to be a little thing, but to the patient, as has been said before, there are no little things. As the victim's story of suffering is broadcast, the trail of similar sufferers is diverted to those who claim to cure without pain, the knife, or loss of time.

Ano-rectal operations differ from other operations in that the field is particularly amenable to many procedures which make for post-operative comfort, while mistakes or neglect may produce pain out of proportion to the seriousness of the complication. Fortunately most of these will, in the course of time, get well anyway. This, however, is hardly an excuse for not doing everything at our command for the patient's comfort and rapid recovery. Most of us have given up the slow-moving, rough-riding lumber wagon for a vehicle with springs and balloon tires.

While a set of rules cannot be laid down for a given case, general principles may be adapted and altered to suit indications. It is perhaps needless to say that ano-rectal cases require the personal attention of the operator. The sugges-

tions offered here pertaining to post-operative comfort may be grouped as: (1) Pre-operative, (2) Operative, and (3) Post-operative.

#### PRE-OPERATIVE

Avoid purgatives. A mild laxative may be given two days previous to operation if deemed necessary. A normal saline enema should be given in the afternoon and evening preceding operation. We should feel under no obligation to use the time honored S. S. enema out of reverence to its age. If there is bleeding and irritation, instillation of two drams of 10 per cent silver nucleinate is soothing as well as somewhat discouraging to local bacterial activity. An enema should not be given the morning of the operation. This makes an aqueous suspension of the intestinal contents, a portion of which is expelled and the remainder left to soil the field of operation.

#### OPERATIVE

Post-operative pain is usually due to tissue under tension from edema and muscle spasm. During the first day or two, tension results from sutures in the skin, thrombotic veins, or muscle spasm from a poorly conceived dressing. Later the tension is caused by edema from infection.

Enough sutures should be used above the mucocutaneous line to assure thorough hemostasis, but below this line sutures are not only rarely necessary, but usually contraindicated. Edema and strangulation of tissue are the immediate results, and infection later. All redundant or overlapping external skin should be trimmed away after which the edges are held in apposition by the sphincters.

All unusually large veins should be sought for and opened, but not tied. The hips-high position will check all external bleeding except an occasional large spurter. When overlooked, these veins frequently become thrombosed to form those exquisitely painful swellings at the anal margin which torture the patient and embarrass the surgeon.

The dressing is important. A fallacy rapidly being discarded is that a large tube with gauze around it should be placed in the anal canal for control of bleeding. As a matter of fact, the sphincteric spasm and restlessness resulting



from this pain encourage hemorrhage. All that is necessary is a short piece of small rubber catheter, which will prevent intra-rectal pressure from retained flatus. A very satisfactory dressing may be made by passing a 2½ inch length of soft catheter through the center of a square of rubber dam and cementing this near the outer end of the tube so that when the dressing is applied, the rubber dam covers the incisions. This dressing is painless to remove, no sticking of gauze to incisions and no breaking off of new granulations to cause bleeding and open avenues of infection. The "removing the packing" crisis has been passed in comfort.

#### POST-OPERATIVE

The fact that patients with acute rectal conditions frequently give up their bed to stretch out on the floor should have given us the hint long ago that position influenced rectal pain. The hard surface raises the hips. The ideal hips-high position has been described by Montague\*. When the patient is returned to bed he may be placed on his abdomen or side with the head low and a large pillow under the thighs. This overcomes the tendency for the ano-rectal tissues to prolapse while the sphincters are still relaxed from the anesthetic, whether local or general. By reducing congestion, it checks oozing and minimizes edema. Without edema and its resulting tissue tension there is remarkably little pain. When the operation has been perfectly done, there is no evident swelling.

As the anesthetic wears off there may be burning and a tendency to sphincteric spasm. A quarter grain of morphine given at this time will usually relax the muscle and prevent further trauma to the incisions so that a very comfortable course follows. Morphine is not withheld until the limit of the patient's ability to take punishment is determined, but rather it is urged upon him. A comfortable, relaxed patient heals faster than the restless, distressed one. The uncomplicated rectal case happily leaves the hospital in from three to six days, but the infected one reluctantly leaves several days later.

It has been my custom to give small doses of pyramidon and codeine regularly for the first day or two whether asked for or not. About half of the cases will require morphine. Constant application of heat with a hot water bottle is useful at this time.

If the patient is unable to void, he should be catheterized in 12 hours, as the pressure from a full bladder may be quite uncomfortable.

A mineral oil preparation dr. ij t.i.d.p.c. beginning the second day is helpful. The least pain with the first bowel movement has been obtained by the following procedure: The morning of the third post-operative day, six ounces of olive oil are instilled into the rectum. Two hours later a normal saline enema is given, after which the patient is allowed to get up to expel this. If there is much pain at this time, hot boric compresses or a hot sitz bath will relieve it. The use of silver nucleinate has proved very soothing when injected after movements.

All enemas and medication should be given through a soft catheter tip, since hard rubber tips seem to have a predilection for incisions rather than the anal canal. If the patient sits in hot water after movements and thoroughly washes the skin incisions, they will heal rapidly without infections, regardless of what local application is used, provided there is proper drainage. The water cooled quartz light has been of the greatest benefit in rapidly relieving the soreness which occasionally results from an infected tender skin incision.

Many people endure rectal pain for years to the detriment of their health and efficiency, because of their fear of operation. Upon this fear has been founded that large industry whose daily newspaper advertisements guarantee a cure of "Piles" without surgery. In fairness to the patients we should tell them that there is a successful nonsurgical treatment suitable in a few carefully selected cases and give them the advantages of this when indicated. The large majority in which surgery is indicated will seek rather than avoid operation, provided we take advantage of the many

\*J.A.M.A. 84:1039 April 4, 1925.

things which make for a rapid and comfortable convalescence.

—R—

### Management of Pelvic Cases

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A woman presenting herself with some pelvic disorder may not be relieved satisfactorily through lack of attention on the part of the physician to details of elementary, nevertheless fundamental, principles involved in these cases.

#### DIAGNOSIS

Fairness to both patient and physician is the first essential. Naked truth often defeats the aims of the physician, and the real motive of the patient; whereas, tactfulness is most efficient in overcoming fear, false modesty and innate reticence. Few women consult their physician covering a single distress. Instead, they procrastinate until there is a conglomerate of symptoms, and the final analysis of the case must indicate the "presenting" symptoms and the "contemporary" symptoms with their proper values. A good history is a true narrative taken with no idea of anticipating the physical findings in the case. A valuable physical examination is an art as well as a science, depending little more upon acquisition from experience than upon attention to detail at the time of execution. With reference to laboratory data viz: testing, research or x-ray, their importance is adequately championed; nevertheless, if really conflicting with clinical data, their interpretation generally should be suspended and the clinical indications followed. Likewise, if physical data actually conflict with historical data, the patient's story often should be the indicator. Pregnancy is not to be forgotten.

#### OPERATIVE APPOINTMENT

The right operation at the wrong time yields no better results perhaps than the wrong operation at the right time. One by one, research advances are diminishing the erstwhile list of indications for emergency procedures. Pelvic pathology is notoriously prominent in the list of causes of intestinal obstruction, but even in these instances the wisdom of replen-

ishing blood chlorides before operative measures are instituted has been demonstrated. (Haden and Orr). Likewise, preliminary transfusion of blood or saline, if available, may transfer from the "lost" to the "won" column a perfectly executed laparotomy for rupture of tubal pregnancy. The results are best in elective cases which have been in the hospital twenty-four hours or more before operation.

Catharsis is to be condemned. Only the mildest laxatives are strictly permissible, and not even those in the thirty-six hours before operation; because, even if they only deplete the patient negligibly, they contribute to liquid stools which in turn are conducive to "gas pains." Furthermore, in the event of opening the intestinal canal formed stool is more successfully handled than liquid stool, both at the time of operation and during the early convalescence. Enemata are better bowel evacuants. For the same reason, in cases practicable, diets yielding debris is more desirable for a few meals previous to operation. Menstruation, while physiologic and not a contra-indication to needed surgery, is not desirable even during early convalescence in view of the attending emotional and physical phenomena. Blood in the generative tract increases the hazards of opening its lumen, due to well known germ-growing properties of blood. Acute pelvic diseases with chronic tendencies are best operated after "cooling off." In this connection blood sedimentation tests, blood counts, temperature curves and pulse ratios can be used as helpful indications of resistance.

And finally, the surgeon often profits by acceding to the patient's wishes as to operative date, unless by ruse the patient seeks to avoid necessary operation altogether. There are few pelvic emergencies.

#### PRE-OPERATIVE PREPARATION

All things else being equal, the army with best fortification wins. A patient's fortification is built chiefly during the twenty-four hours immediately preceding operation. This applies both to emergencies and elective cases, less intentional in the former. Pessaries, tampons, local treatments and douches have



a definite place in most pre-operative preparations. Patients coming to the operating table well saturated with fluids need less water immediately post-operative. Those with high glucose reserve tolerate anesthesia better and endure more happily the post-operative fast. Digitalis in liberal doses is an invigorator to heart, bladder and bowel function. Sleep is the best combatant against apprehension and restlessness. For that reason many surgeons interrupt the last hour of the night's sleep, usually promoted by some mild sedative, by starting "twilight sleep" or its various modifications and bringing the patient to an early morning operation, thereby avoiding the ordeal of waiting for a later hour. If there is an interval, tea and toast are gratefully received on an empty stomach, and without unfavorable results. Sufficient skin preparation consists of shaving, soap and water scrub, followed by ether or alcohol rinsing off, if done the night before and all repeated on the operating table save the shaving. Ether is the anesthetic of choice, almost necessitated, by reason of the patient's position and muscular relaxation required. Ethylene, gas-oxygen, sacral and local anesthesia are named in order of value for intra-pelvic work. In no instance is voluntary emptying of bladder or bowels dependable.

#### OPERATIVE TECHNIQUE

The peritoneum of the female pelvis is peculiarly resistant to infection, but in no sense to the degree that strictest asepsis should not be observed. Trauma is of paramount importance. Porter of Boston is credited with the statement "I can spit in the pelvis and have a recovery if there is no trauma." Trauma can be diminished by operating on the patient in marked Trendelenburg position in which abdominal "packing off" is rarely necessary. Correct application of standard instruments and technical principles yields better results than innovations. "When in doubt, drain"—is a safe rule, reports to the contrary notwithstanding. Neatness, as peritonealizing raw surfaces, cutting ligatures short, etc., yields rewards when not at the expense of the patient's condition. In view of the safety of laparotomy at present,

there are few indications for the vaginal approach to the pelvic viscera, save for drainage purposes. Exploration of other viscera is permissible under proper precautions, but adjunct operations are usually to be condemned.

Organ conservation is yet controversial; however, the following suggestions must be kept in mind:

1. Only the healthy cervix should be conserved.

2. Before the age of thirty-five reproductive ability is of prime importance. If this is impossible, retention of normal menstruation is of next importance. (Graves).

3. After the age of thirty-five "the most radical surgery is often the most conservative." (Graves).

4. "It is a curious thing that there are still many operators who believe that if the ovaries are spared the constitutional disorders due to castration will be obviated." (Hertzler).

5. It is a wise surgeon who removes no tissue without consent.

#### POST-OPERATIVE CARE

"Routine medication" is not in the category of the careful surgeon, for every patient is a law unto herself. Maintenance of body heat and liquids are vital. Morphine is the drug par excellence for control of pain but excessively used produces stubborn nausea and resistant distention. Dry heat locally is an aid in pain relief but after twenty-four hours contributes to delayed union. Hot douches should be postponed until the patient is out of bed. A diet yielding debris started early promotes peristalsis, inhibits intestinal fermentation, and encourages the patient. An aid in removing lingering ether tastes is Dobell's spray in the nose with glycerine and lemon juice for mouth wash. Management of dressings, drains, and sutures should exhibit pride as well as skill; and, should be comfortable. The practice of adhesive yanking is surely a remnant of the Inquisition Period.

#### COMPLICATIONS

Still the opinion pops up sporadically that, if the given diagnosis be correct and the proper operation done, there will be no complications. To date, such can merely be a worthy ambition. Without

reference to frequency of occurrence, or attempting to discuss their probable causes, the most common complications of pelvic surgery are: accidental infections in traumatized tissue, pneumonia, ileus, infection of the urinary tract, phlebitis, hemorrhage, post operative kinks and adhesions, acute dilatation of stomach, and embolism. Before operation it is well to anticipate complications and accordingly direct treatment, but after operation anticipation should become realization before active measures are instituted.

#### CONVALESCENCE

Dismissal of a patient from the hospital neither terminates the convalescence nor relieves the surgeon of responsibility. Six weeks is a remarkably short convalescent period after the simplest laparotomy, and most vaginal cases, if a general anesthetic is used.

It is neither practicable nor necessary to have daily supervision of the convalescence, but a little time instructing the patient establishes confidence among all concerned and the oft-heard term "nerves" has come to mean a rather vivid condition, which in many instances is due to patients being poorly informed as to fundamental habits and hygiene.

#### DISMISSAL

When the patient engages the services of a physician it should be *prima facie* evidence she is going to co-operate. If such is not the case, it is better the client be dismissed at once. Fortunately, such incidents are rare, and dismissal generally follows relief or improvement. At that time, however, it is for the good of the patient and the protection of the physician that more than a perfunctory examination be made. And finally, the physician should impress the patient with the value to scientific medicine of a report at the end of six months or a year.

—R—

#### Hernia of the Lung

J. G. MONTGOMERY, B.S., M.D.

#### PRESENT ORGANIZATION

A protrusion of any part of one or both lungs, through an abnormal opening in the boundaries of the thoracic cavity, is called a lung hernia. They occur mainly through the chest wall, are

usually inside of a sac of parietal pleura, and are always under the skin.

It seems that the first case reported as hernia of the lung was described by Roland<sup>1</sup> in 1499. Later cases were reported by Hildani<sup>2</sup> in 1601; Loyseau<sup>3</sup> in 1617, and Plateri<sup>4</sup> in 1641. The case described by Felix Plateri was probably the first true lung hernia, as the earlier cases were really traumatic eviscerations. Nine of the fifteen cases reported previous to 1800 were true lung hernias.

Hernias of the lung may be classified as follows:

#### A. According to etiology:

1. Congenital.
2. Acquired.
  - (a) Traumatic.
  - (b) Spontaneous.
  - (c) Pathological.

#### B. According to location:

1. Diaphragmatic.
2. Thoracic.
3. Cervical.

Congenital pneumoceles are due to defective development of the boundaries of the thoracic cavity. According to Hochsinger<sup>5</sup>, all lung hernias are congenital when they occur during the first weeks of life and are not evidently acquired. The extensions of the pleural sacs up into the neck seem to offer the most favorable sites for this type of pneumocele.

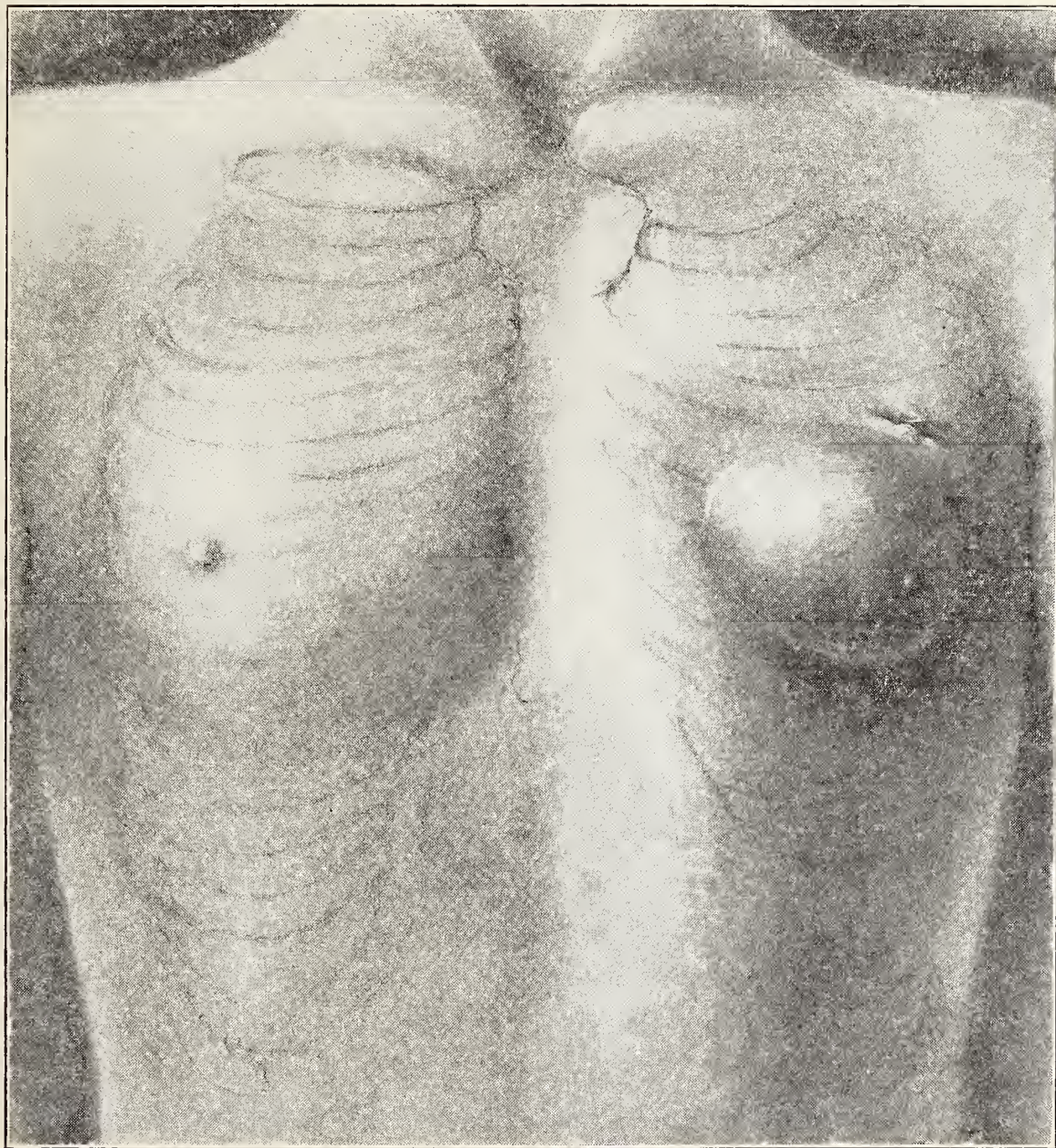
The majority of the hernias of the lung has been acquired as a result of trauma. They have been reported following crushing and stab wounds of the chest wall, as well as wounds produced by gunshot, shrapnel, and such operations as the Estlander operation<sup>6</sup>. Morel-Lavallee<sup>2</sup>, classified lung hernias as traumatic when they occurred soon after an injury, and as consecutive when they occurred late after an injury. Inasmuch as the consecutive type differs from the traumatic type only in the time of appearance, the former group was omitted from the classification.

Spontaneous hernias of the lung are due to a "locus minoris resistentiae" in the boundaries of the thoracic cavity and an abnormal increase of the pressure in the air space of the lungs, both of which must be present at the same time as neither seems to be able to account for



a spontaneous hernia. Absence or diastasis of muscles, absence of ribs, and defects in the cervical fascia are reported as causes for weakening the chest wall. Chronic bronchitis, whooping cough, straining at stool, bearing down during labor, blowing glass and musical instru-

One diaphragmatic pneumocele was found in the literature. It was described by Beale<sup>7</sup>, as a right subphrenic abscess following an injury which caused the lung to herniate through the diaphragm, as well as a perforation of the intestine. The lung tissue was pathologically am-



ments, and heavy lifting are claimed to be causes of increasing pressure within the lungs which resulted in herniation of the lung through places of lowered resistance in the chest wall.

Pathological pneumoceles have been reported following abscesses of the lung, chest wall and breast.

puted and secondarily infected. The findings were confirmed by autopsy and a microscopical examination of the tissue.

A review of 165 cases revealed 79 cases where the location is definitely mentioned, and of these 16 were cervical, 62 were thoracic and 1 was diaphrag-



matic. Anatomically, there is probably an explanation for such an occurrence. Anteriorly from the costocartilaginous junction to the sternum, the external inter-costal muscle is absent. Posteriorly, from the costal angle to the vertebrae, the internal inter-costal muscle is absent. The lungs have herniated both through the front and the back of the chest wall at the weakened places mentioned, but the hernias occur more often anteriorly alongside of the sternum. The pectoralis muscles do not seem to afford the restraint anteriorly that the sacrospinalis, trapezius, latissimus dorsi, and rhomboideus muscles do posteriorly.

The early writers discussed at great length the mechanics of the production of lung hernias. They are more or less agreed upon the facts that a hernia of the lung depends upon a "locus minoris resistentiae" in the boundaries of the thoracic cavity, as well as, an increase in the pressure within the lungs themselves. The pressure changes in the lungs are due either to voluntary or involuntary contracture of the muscles that bound the thoracic cavity, or both, along with varying degrees of closure of the glottis. According to Sir Arthur Keith<sup>8</sup>, in his "William Banks Memorial Lecture" delivered at the University of Liverpool, November 1, 1923, on "The Origin of Hernia," "almost all, if not all, hernias in adults are caused by repetition of strain day by day," and this is applicable to pneumocele.

The signs and symptoms of lung hernia vary. Pain and tenderness in the region of the hernia and a palpable orifice through which a pulsion mass of lung appears and disappears, seem to be fairly constant. A chronic, spasmodic, non-productive cough is often present. The congenital ones are usually characterized by a mass which changes shape, size, and position, synchronously with respiration. The early traumatic hernias are usually obscured by the more severe signs and symptoms of the injury. The later or consecutive types of traumatic hernia differ from the spontaneous pneumocele only in the evidence of an injury. They are characterized by a cough, which causes the lung to project and pain in the region of the hernia. Local inflam-

mation may be a sequence of the incarcerated non-reducible types. One may see the hernia as it appears and disappears, as well as a depression over the orifice in the chest wall. The bony or fibro-muscular margins of the hernial orifice may be palpated. The lung can often be grasped and held, and the soft crepitant consistency recognized. The percussion note of the mass is usually tympanitic, and one may hear whistling and crackling rales produced in the herniated mass while holding it.

A palpable orifice, through which a smooth soft crepitant reducible tumor appears under the skin, the size and shape of which varies with respiration, should make the diagnosis perfectly evident, although mistakes have been made.

The treatment is either medical or surgical or both, depending upon the type of hernia, as well as the local or intrathoracic pathology. Fox<sup>9</sup>, reported the cure of a case by a bandage. Grant<sup>10</sup>, reported a recurrence following an apparent cure by a bandage. Frickhoffer<sup>11</sup>, reported a case in which a bandage produced marked dyspnea and cyanosis. Any condition characterized by a cough, calls for the treatment indicated, as the cough should be controlled before the hernial orifice is closed. If, however, the herniation seems to be the cause of the cough, repair of the hernia will remove both conditions. Where the occupation is a factor, it should always be considered. Corsets, elastic bands, plates, and pads held in place by bandages, all have been used. Vogler<sup>12</sup> in 1898, suggested a plastic operation, using a bone flap from the sternum. Vulpius<sup>13</sup>, in the same year, described an operation performed by crossing strips of the ribs and suturing them in place with silver wire. That hernia recurred. Graham<sup>14</sup>, packed the sac of a cervical pneumocele with iodoform gauze and secured a permanent cure. Tuffier<sup>15</sup> freed and lighted the sac and closed in the usual manner, and obtained a cure. Reynier<sup>16</sup> made an immediate closure of a traumatic pneumocele, with a cure. The authors secured a cure of thoracic pneumocele which came through the fourth interspace anteriorly alongside of the sternum by turning up the perichondrium



and periosteum of the anterior surface of the fifth costal-cartilage and rib into the fourth interspace and then bringing down both in place with chromic catgut. The pectoralis major muscle and skin were closed in the usual manner, a gauze dressing applied, and a felt pad placed over the wound. The pad was held in place by a 3-inch adhesive bandage which completely encircled the chest. The recovery was uneventful and when discharged, there was a solid bone like formation between the fourth and fifth ribs where the hernia orifice was formerly located.

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## TUBERCULOSIS ABSTRACTS

The *x-ray* is a valuable diagnostic aid in diseases of the chest. Definite roentgenological evidence of enlarged lymph nodes, plus a positive tuberculin reaction strongly indicates tuberculosis of the juvenile type. Definite parenchymal changes seen in the *x-ray* film, located usually in the upper half of the chest and which coincide with the clinical findings, strongly support the diagnosis of pulmonary tuberculosis. But the *x-ray* must be regarded, at best, merely as an aid to diagnosis. Interpretations of the plate should

always be made by roentgenologist and clinician jointly.

## Chests of Normal Children

A group of three roentgenologists, working in close co-operation with as many clinicians, attempted to establish the *x-ray* appearance of the normal child's chest. Five hundred children were studied. While it was found impossible to describe a normal chest, they succeeded in establishing a theoretical normal with wide variations that would serve as a basis for the interpretation of abnormal appearances. A composite diagrammatic reproduction of several roentgenographs was made and marked off into three zones. Zone I contains the root shadows, Zone II, the trunk shadows gradually fading out into their final subdivisions and Zone III, radiating lines from these and shading off before the periphery is reached. The conglomerate shadow, commonly called the hilum shadow, when found lying entirely within Zone I, may be regarded as normal except where it is made up of a solid mass of homogeneous shadow giving undoubted evidence that it represents a growth or mediastinal pleurisy. Calcified nodes at the root of the lung without evidence of lung disease are of no significance except as a possible evidence of some healed inflammatory condition, possibly, but not necessarily, tuberculous. Where in Zone II and II normal shadows do not gradually fade out as described, the appearance may be due to a variety of conditions of an inflammatory nature or otherwise; it may accompany a tuberculous process but is not necessarily indicative of tuberculosis.—*Clinical and x-ray findings in the chests of normal children, Harry K. Pancoast, Kennon Dunham and F. H. Baetjer, Amer. Rev. of Tuberc., July 1922, VI, 331-40.*

## The Healthy Adult Chest

The same group of clinicians and roentgenologists later attempted to describe the roentgenological appearance of the normal adult chest. In view of the many lasting evidences of previous disease found in clinically normal chests, it was decided to discontinue the use of the term, *normal chest*, and adopt that



of *healthy chest*. On this basis, the clinicians selected 280 adults whose chests were clinically normal. Relationships and appearances of the bones, soft parts, diaphragm, heart, aorta, trachea and bronchi were studied, as well as the hilum shadow, the trunk shadows and calcifications. It was found convenient and practical to divide the chest into zones as in the child's chest studies. Another valuable landmark was established by dropping a perpendicular line from the mid-point of the left clavicle. This line passes well outside the middle of the dome of the left diaphragm and the apex of the heart is well within the line. Calcifications were almost universally noted in one or both hila by two members of the *x-ray* group and not so frequently by the third member. Calcifications were occasionally found in the upper lobes and quite frequently along the heavy trunks to the lower lobes. As calcified tuberculous lesions increase with age and as they are more numerous with children in contact families than with those in non-contact families, it was concluded that calcified tracheobronchial lymph nodes in adults are less significant than in children, for in most instances healing has doubtless occurred.

The complete report, illustrated with diagrams and *x-ray* photographs may be secured through the tuberculosis society. —*Studies on Pulmonary Tuberculosis. II. The Healthy Adult Chest*, Henry K. Pancoast, F. H. Baetjer and Kennon Dunham, *American Review of Tuberculosis*, April, 1927, XV, 429-71.

### X-Ray for Discovering Juvenile Tuberculosis

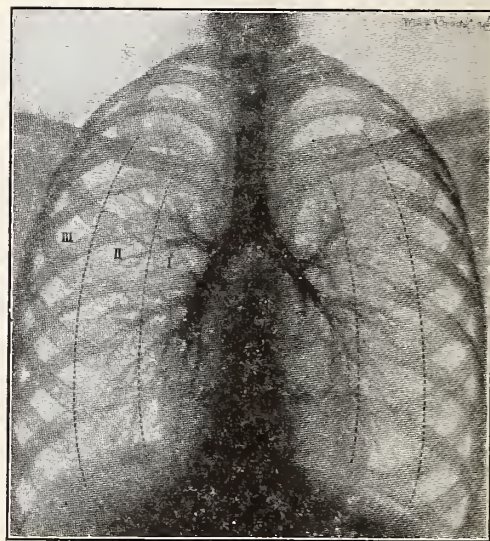
A study of 50,000 school children, made by the Massachusetts Department of Health, showed that 3.7 per cent had hilum (tracheobronchial) tuberculosis. Without a roentgenograph, no absolute diagnosis of hilum tuberculosis can be made, nor can tuberculosis be eliminated in an ill child unless the *x-ray* films are negative. Slight changes in area or of density of the hilum shadows are of no significance, but areas of increased density at the root of the lung or along the trachea that have the form of glands

or gland masses justify the assumption that calcified tuberculous glands are present. Rarely one finds a large area of homogeneous shadow extending from the hilum toward the periphery due to a recent first infection with tubercle bacilli. Serial films, taken at several months' intervals, show a gradual absorption, ending eventually in a small, calcified nodule.—*The diagnosis and prognosis of Juvenile Tuberculosis*, Henry D. Chadwick, *Boston Medical and Surgical Journal*, January 26, 1928, CXC VII, 1399-1401.

### Serial X-Rays to Follow Progress

Many roentgenologists and clinicians advise that *x-ray* plates be made serially; that is, at regular intervals in order to determine (in conjunction with clinical findings) whether the disease is progressing, retrogressing or remaining stationary. A brief summary of the course of tuberculosis as followed by the *x-ray* is as follows:

In early active tuberculosis, infiltration most commonly appears in the peri-



Composite diagram made from several roentgenographs of normal children's chests and divided into zones.

phery of the lung above the level of the third rib. The shadows appear light and fuzzy or mottled, densest in the centre. Leading from the mottling toward the lung hilum, there are usually seen fuzzy areas along the linear markings and the bronchial trunks. As the disease progresses, the mottling may spread over a considerable area and the shadows



seem to coalesce. The densest shadows are interpreted as caseation and these usually appear where the dense areas in the mottling were first seen. From infiltration to caseation ordinarily requires more than a month. Later, the dense caseous shadows become less dense and often entirely disappear, thus leaving areas of rarefaction. By the coalescence of several such areas, a large area involving, sometimes, the greater part of the upper lobe may result, giving evidence of cavitation. As healing begins, the hazy outlines, particularly those at the hilum, become sharper and the areas

remains only a heavy clouding or small deposits of fibrous tissue.—*Modern Aspects of the Diagnosis, Classification and Treatment of Tuberculosis, J. A. Myers, Chap. IX, p. 96, Williams & Wilkins.*

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### For the Treatment of Pneumonia

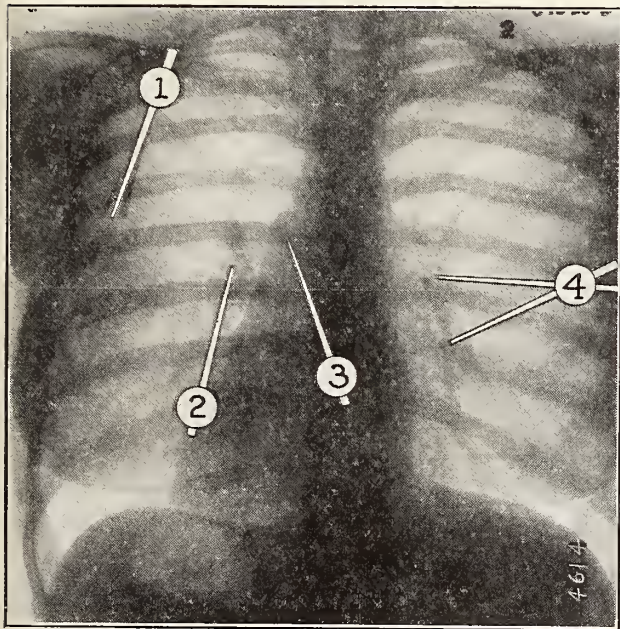
The vaccine treatment of pneumonia has not given very satisfactory results. With the purpose of obviating the chief difficulty in the vaccine therapy of this disease, namely tardiness of action, Parke, Davis & Co. have brought out a new antigen, one that represents the vaccine principle but acts much more rapidly. It is called *Pneumococcus Immunogen*.

Vaccines are killed bacteria. *Pneumococcus Immunogen* is obtained from cultures of the three specific types of pneumococcus, but there are no bacteria, dead or alive, in it. It seems, from the researches conducted and published by Parke, Davis & Co., that the antigenic principle of bacteria is not so much *in* the bacteria as *on* them; it can be washed off. *Pneumococcus Immunogen* consists of the washings of pneumococci, tested serologically to demonstrate its superiority to a corresponding bacterial vaccine.

The Immunogen is administered, as a rule, intramuscularly, though it can be given intravenously in smaller doses; and the injections may be repeated at intervals of four or five hours.

Literature on *Pneumococcus Immunogen* is offered to physicians by Parke, Davis & Co.

—R—



**Peripheral Nodule with Tracheobronchial Calcification**

In the left fifth interspace, near the posterior axillary line, is an irregular calcified nodule (1). On the shadow of the left arterial main stem at the level of the sixth rib and interspace, is a faint irregular calcium shadow (2), and another, irregularly club-shaped, lies mesially on the aortic curve at the sixth rib (3). The homogeneous densities on the right (4) are due to blood vessels, axially radiated.

Roentgenograph and Interpretation by F. M. McPhedran.

shrink. Definite opacity is interpreted as deposits of calcium. Consolidated areas, as they become fibrous, show heavy bands extending from the hilum to the periphery. After calcification takes place, areas interpreted as caseation increase in density and finally become sharp and opaque. Calcification is found to develop from eight months to two years. The obliteration of cavities may be shown by the x-ray. Around the areas of rarefaction (cavitation) is seen a dense ring (fibrous wall). As fibrosis increases, the ring contracts until there

A shrill police whistle.

"All right—all right—all right—pull over to the curb. Now first, ya was goin' too fast—don't talk back to me, I timed ya—an easy 40, maybe more. Second, where's ya new plates—forgot 'em, huh?—well, maybe ya forgot yer tail-light too didn't ya? Notice the bulb's out. Fourth count, ya ran the light—yes ya did and don't talk ta me; it was red when ya started across—shut up—tell it to the judge—and lookit ya headlights, wadya think ya are, a motorcycle, these dam' one-eyed cars, sixth count ya—"

"Just then the meek little man's wife leaned forward from the back seat and out of the sedan's rear window. With an ingratiating smile she plucked at the traffic cop's sleeve.

"You mustn't mind him, officer. Just don't pay any attention to him. He's drunk."—*Emporia Gazette.*



# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - Editor**

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### POLICY OF THE MEDICAL SCHOOL

The State Medical School receives its entire support from the state and can justify its existence only by the service it renders both the medical profession and the people of the state. The primary function of the School is an educational one, that of training young men and women in the complex and technical professions which are to safeguard the health and physical well being of the citizens of the state. The student is given a broad training designed primarily to make a good general practitioner, but at the same time to give him sufficient special knowledge so that he can cope intelligently with the advances of the future. Not only does the Medical School prepare Kansas boys and girls for the practice of the medical and nursing professions but it should be the medical center of the state where those in practice can receive postgraduate instruction and assistance. The School furnishes many speakers for various medical societies of the state. A letter to the Dean of the School will provide a speaker provided sufficient notice

is given and the local society provide the bare traveling expenses of the speakers.

A second function of the School is the stimulation of the investigative spirit in all its students and employees and the encouragement of new contributions to medical knowledge. In spite of its small size and limited facilities its research activities have merited the respect even of the older eastern institutions of the country.

A third function is a reparative one, that of treating the sick and restoring them to health and usefulness. This function is a very important one, especially inasmuch as it justifies the expense of the School to the great masses of voters who often fail to appreciate its educational and research value, but who can understand the restoration to health of some invalid or injured persons of their acquaintance.

In the development of these functions many perplexing problems arise and the School would enlist the aid of the medical profession of the state in their solution. One of these is the problem of adequate medical care to those of moderate means. It is the policy of the School to discourage free treatment of all patients and to require all to pay something for their treatment. Every effort is made to prevent pauperizing the public. If patients apply for treatment none are turned away because of lack of funds, but the treatment is given with the request that they "bring the money next time" or "when they can." Patients from over the state are not given continued treatment without a letter from the local physician recommending that this be done. Yet when a patient from western Kansas insists that he be treated on the basis, that this is a tax supported institution and that he has a right to it, a delicate problem arises that requires much tact and patience to solve. The fact that the hospital has a large number of part



pay beds and relatively few private rooms and even fewer free beds illustrates the endeavor to provide for the patient of moderate means.

Another problem is that of preventing the abuse of the dispensary clinic by those who can afford a private physician. Every effort is made to weed such persons out, yet some of these afford excellent teaching material and the need for demonstrations often leads us to overlook the private character of such a patient, especially when the patient knows he is an interesting case and insists on free treatment in return for submitting to inspection by students.

There is also the problem of the selection of medical students. Shall they be selected on scholarship only? Shall a mediocre student, who is a resident of Kansas, be given preference over a foreign student with an exceptionally good scholarship record? What shall be done with the student who has a good scholarship record but is manifesting unethical tendencies that will probably make him a pernicious influence on the public? Legally this cannot be proved, yet the faculty may be reluctant to grant him a degree.

One of the greatest difficulties arises from the overcrowded condition of the hospital. Doctors frequently get exasperated at the delay in getting patients into the hospital. Emergency cases must be provided for. Typical teaching material must also be made available. County cases where no medical facilities are available must be given preference. Often less than ten patients are dismissed in a week from the hospital, with 40 applications for admission. When conditions are like this what shall be done when a doctor from western Kansas sends a patient into the hospital without any reservation but with a note requesting the hospital to provide for *this*

patient? Often such patients are penniless and are told that the hospital is a free state hospital. Frequently such cases are helpless old men who are useless as teaching material and would only tie up a bed for a genuine clinical case. These are daily occurrences and often cause unfair criticism.

Another problem that is embarrassing at times is the charity patient who is sent to the clinic by some doctor in the state with the request that he be seen by a certain doctor on the staff and this is usually the busiest man in the institution. Such a request cannot be complied with and the patient cannot understand why. Some members of the faculty never attend the outpatient clinic and are not available unless a patient is admitted into the hospital and then only on certain specified days.

What shall be done with the patient who comes in with an indefinite note from his doctor requesting an "x-ray of his stomach," omitting any statement as to the financial status of the patient—especially when the patient is told that he can get it in a few hours and return home? We wish to accommodate the doctors but we must also safeguard the reputation of our staff and institution and cannot afford to make an error. Hence such a patient is placed in the medical clinic to ascertain where the x-ray is needed and then the appropriate plates are made. This, however, requires time.

Patients coming to this institution frequently confuse the hospital and the outpatient clinic and often resent not being able to enter the hospital at once. The lack of a vacant bed usually is responsible.

Criticism also is made of the orthopedic clinics being held over the state under the auspices of the School. This is evidence of the natural conflict of in-

terests between a specialist and of the people of the district concerned. These people help to support the Medical School and have a right to its services if they insist on it. The attitude of the School is that it should afford such service to these communities if it is with the approval and co-operation of the local medical organization.

There are occasions when an effort to serve the public apparently conflicts with the desires of some members of the profession. When such a condition arises the School invites the co-operation of the profession and solicits its advice so that any action taken will be for the mutual satisfaction of all concerned. In fact, the Dean is anxious to have any constructive criticism and suggestions from the "men on the firing line." If our students are failing, if they are not prepared properly, if their conduct is unprofessional, if the patients report inadequate care at the hospital, let us know about it. The School is always ready to co-operate and assist in the improvement of medical practice and medical standards of the state.

H. R. W.

#### **MEDICAL SCHOOL NOTES**

Dr. Ward Summerville, interne at Bell Memorial Hospital, has accepted an Assistant Residence in Pathology under Dr. H. T. Korsner at Lake Side Hospital, Cleveland, Ohio.

Dr. R. L. Sutton was the guest of the Sedgwick County Medical Society at Wichita, March 20. In the evening he gave a lecture in the Central High School Auditorium under the auspices of the Society.

Dr. W. A. Myers addressed the Science Club of Park College Thursday evening, March 8, on "The Life and Work of Lavoisier."

Dr. Rose A. Riste, M'20, who has been with the Mary Wilson Sanitarium, Tillaunia, Raj Putana District, India, has

returned to this country for postgraduate work in medicine.

Dr. Sam Snider has been appointed on the consulting staff of Mt. Vernon Hospital.

Dr. Clinton K. Smith addressed the Crawford County Medical Society at Pittsburg, Kansas, March 23, on "Urological Problems in Children."

Drs. J. L. and W. A. Myers gave a dinner at the Kansas City Club, Monday night, March 26, to the Heads of Departments at Park College.

Dr. J. G. Montgomery addressed the Central Kansas Medical Society at Hays, Kansas, March 29, on "Chronic Emyema."

Drs. Thomas G. Orr and John G. Hayden visited the Medical School of the University of Chicago, April 6.

At the meeting of the American Climatological and Clinical Association in Washington, D. C., May 1 and 2, Dr. Logan Clendening read a paper on "Chronic Nasal Infection and Chronic Bronchopulmonary Disease" and Dr. Ralph H. Major read a paper on "Renal Function in Arterial Hypertension."

Dr. R. H. Major read a paper at the meeting of the Association of the American Physicians on "Blood Chemical Studies in Arterial Hypertension," May 1, 2, and 3, at Washington, D. C.

Dr. H. J. Prentiss, Professor of Anatomy, University of Iowa, School of Medicine, was in Kansas City three days, April 5, 6 and 7, conducting a School of Anatomy for the Ear, Nose and Throat Society of Kansas City. On Thursday evening, April 5, Dr. Prentiss made a speech at the annual banquet of the Nu Sigma Nu Medical Fraternity. In 1909 while serving as National President, he installed a chapter of this Fraternity at the University of Kansas. He also visited the Medical School of the Kansas University while in Kansas City.

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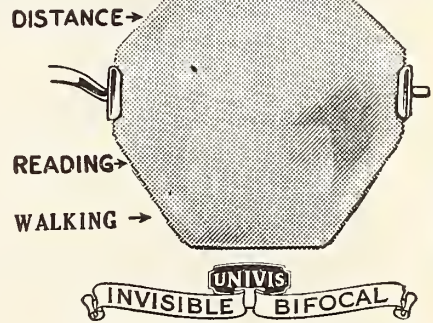
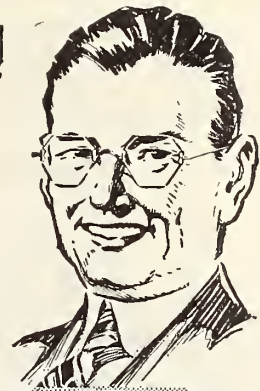
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a research fellowship for the coming  
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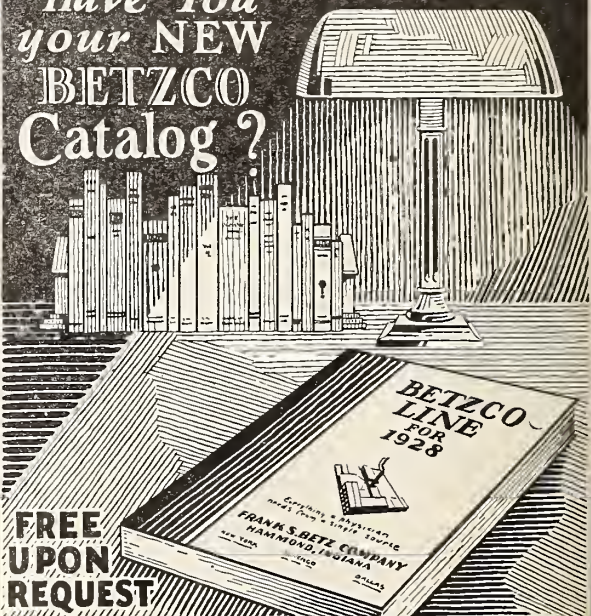
The establishment of this research fel-  
lowship is in line with the policy of the  
Maltbie Chemical Company to extend its  
research activities and to contribute to a  
study of the chemistry of important  
drugs.

—R—

## Dietary Deficiencies and Infection

A study has been made attempting to  
correlate the production of rickets with  
the susceptibility to tuberculosis. In the  
white rat, rickets may be produced with  
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this animal is highly resistant to tuberculosis when the organisms are given subcutaneously. Young rats were fed on rations presumably adequate with the exception of calcium and the antirachitic factor. Rickets regularly appeared, more readily in cloudy weather than in bright. In the group of these animals injected with tuberculosis organisms the disease could be demonstrated. The series given the defective ration alone developed rickets but no tuberculosis, while doses of the infecting organisms many times larger than those used in the rachitic group failed to induce tuberculosis lesions in a number of rats given an adequate ration. Similar results were obtained when the experimental ration lacked only vitamin D for several generations. Rickets was produced and with it a susceptibility to tuberculosis. (J. A. M. A., Feb. 4, '28.)

— R —

"Only those who can be very happy can be very sad. If you never feel great exaltation, be grateful. You never will know great melancholy. A man must be capable of one extreme to be capable of the other. Nature preserves a balance in all things."—Quillen.

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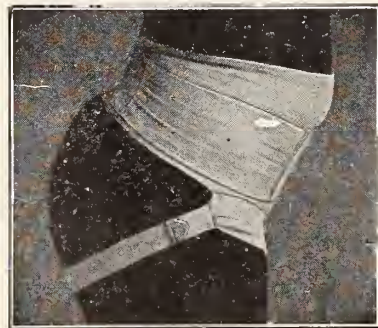
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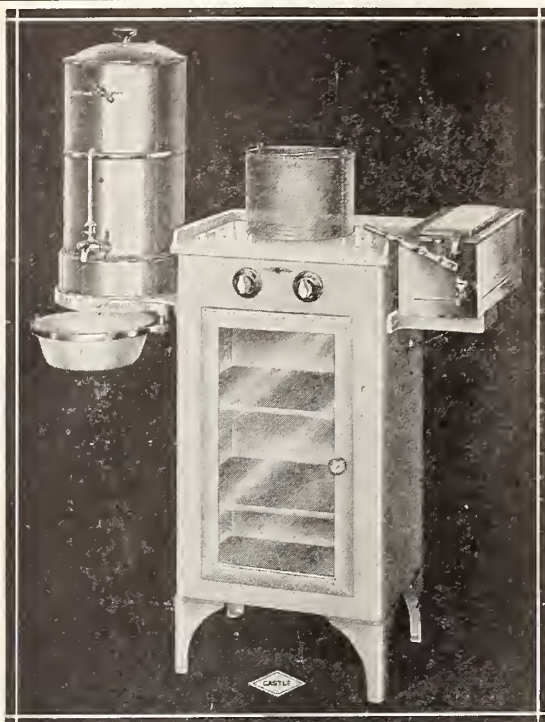
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# THE JOURNAL

of the

## Kansas Medical Society

TOPEKA, KANSAS, JUNE, 1928

No. 6

### Psychopaths and the Criminal Law

WERTIS, M.D., Wichita

Medical Society at Wichita, May

psychopathic state, is as  
as is personality itself,  
its basis, inherent per-

It is a behavioristic  
problem. It is as definitely a diseased  
personality, as pneumonia a diseased  
condition of the lungs. Its signs, how-  
ever, are measured in terms of the pa-  
tient's reactions to society, and not in  
terms of temperature, pulse, and respira-  
tion. In studying the literature of this  
condition one is strongly impressed by  
the lack of definiteness in its classifica-  
tion. This, however, is more readily  
understood when one considers what a  
wide field we have in the realm of ab-  
errant personality, and how equally pa-  
thological to the welfare of society dif-  
ferent types of widely varying personal-  
ities can be. For this reason it is almost  
impossible to give an adequate definition  
of constitutional psychopathic state.  
Tanyi and others discuss this type of  
case under the name of "constitutionally  
immoral;" Krapaelin as "morbid per-  
sonalities;" other writers speak of them  
as the "emotionally unstable;" while  
still others classify these people as  
"moral imbeciles." King speaks of them  
under the heading "Persons of psycho-  
pathic make-up."

The patient who is a constitutional  
psychopath is inherently defective, but  
this defect lies chiefly in the emotional  
as distinguished from the intellectual  
sphere. King has very aptly expressed  
this when he says that the defect is not  
so much a lack of quantity of mind, as  
the possession of a mentality which is  
qualitatively abnormal.

On occasional casual contact with these  
people one might often fail to see any  
marked defect in personality, or he might

perhaps think of the person as a bit  
"queer," so to speak; this, of course,  
depending upon the degree of his antiso-  
cial conduct. However, on somewhat  
more definite contact, the observer be-  
comes more and more impressed with the  
fact that the person is a social misfit.  
The constitutional psychopath varies in  
his mental ability from that just superior  
to the moron to intellectual brilliancy.  
Sidis has said, "In some of these people  
one can not help being amazed at the  
apparent wealth of intellect and poverty  
of accomplishments."

One of the most noticeable and out-  
standing characteristics of this class is  
their lack of ability to consistently, per-  
sistently, and consecutively apply them-  
selves to any line of endeavor. This char-  
acteristic caused the French to speak of  
them as the "emotionally unstable."  
These people not infrequently possess  
the mental equipment and characteristics  
which, if consistently applied, would  
make them most valuable to society, but  
they lack the determination, volition,  
foresight, and equilibrium to apply them-  
selves for any length of time to any line  
of endeavor. Jelliffe says, in speaking  
of this class, "It includes a considerable  
number of juvenile delinquents; of the  
recidivist type of criminal; of the pau-  
pers and prostitutes; of the ne'er-do-  
wells; the black sheep of the family; and  
at higher levels, the erratics, half  
geniuses, half-crazy persons with bril-  
liant spots here and there but without  
continuity, whose efficiency is materially  
impaired and who live often a more or  
less wandering existence."

#### ETIOLOGY

There can be little doubt that heredity  
plays a very important role in the  
etiology of the constitutional psycho-  
pathic state. In the 50 cases reviewed by  
Visser, 20 showed evidence of a definite  
neurosis, psychosis, or of aberrant con-  
duct. In the 90 cases reviewed in the

preparation of this paper, 43 or 47.7 per cent, gave a history of neurotic taint in their families. Of these, 24, or 26.6 per cent, gave a history of alcoholism; and 10 per cent gave a history of father, mother, brothers or sisters being confined as inmates in institutions for the insane. In the group of cases reviewed, 37 cases, or only 42.8 per cent, gave a history of normal heredity. There is little doubt that this percentage is too low since it is based alone upon the histories given by the patients, and there is always a tendency on the part of patients not to admit a mentally defective heredity. They are perfectly willing to admit most organic conditions, but they are always reticent about giving a history of mental heredity taint.

#### SYMPTOMS

1. Mental Disability—One of the most noticeable and outstanding characteristics of the constitutional psychopath is his emotional instability, his changeableness. He is not able to definitely and persistently hold his mind upon any task. For this reason we find him changing work frequently. We find him jumping from one type of work to another, and from one section of the country to another. He is a slave to his emotions. He oscillates mentally from one attitude to another. He lacks critical ability, the ability to weigh things mentally and filter out the desirable from the undesirable. This patient is the one we so often hear the laity speak of as being nervous, the person who has always been unable to meet and satisfactorily cope with the problems of everyday life.

His mentality is usually equal to the average and some particular faculty may be especially well developed, as that for music or public speaking. This type of person often changes his whole outlook on life very frequently. These people accept anything that is new, excessive enthusiasm, and excessive reaction to environment seem to dominate their entire lives. They do not use judgment in their changes from one type of work to another, or from one place to another. When asked why such steps were taken they either don't know why or the superficiality and poor judgment of their acts are much in evidence. These people never

follow anything to its conclusion. They often times realize their inability to do satisfactory work; however, in spite of it they frequently attempt very difficult tasks only to fail again. These are often the people who have finished the eighth and ninth grade in school and who want vocational training in law, medicine, or engineering.

Perception is usually unimpaired, but every view is superficial. They never stay at any type of work long enough to learn the details and technicalities which make superior workmen. They tire easily of any kind of work. Their lives are a series of thoughtless, venturesome, unreasonable acts.

2. Defective Volition—These people frequently start out on some momentarily concocted pet scheme with a superabundance of volition and initiative, but they soon become tired of application, lose interest, and begin looking for some new line of endeavor. For this reason they do not become proficient at anything. They lack the volition to overcome the difficulties in the way of accomplishment, and, as a result, they follow the path of least resistance through life, regardless of the direction in which it may lead them. They seem to be forever fleeing from the realities of life and trying to escape its responsibilities.

These people not infrequently feel their inadequacies and inability to fit successfully into the social order. There is often a marked degree of self-reproach; they have sufficient mentality to see their own ability to accomplish, and at the same time to see how miserably they have failed to get results by their methods of attack.

3. Lack of Judgment—These individuals seem to lack ability to discriminate, to filter the good from the bad. Under characterization remarks in one-third of the cases reviewed the physician stated definitely that the patient had poor judgment. In one case only did the physician state that the patient's judgment was good.

4. Industrial Instability—Lack of volition in these cases is clearly shown by the industrial history. Of the cases reviewed for this report only 22 per cent gave a definite industrial history. Of



these the average length of time a job was held was 15.2 months. This average, however, was markedly raised by a few individuals who remained at one type of work for a rather extended period of time. Fifty per cent of these cases failed to average one year at one type of work; 25 per cent failed to average six months; while 15 per cent averaged holding a job less than two months.

To make a diagnosis of constitutional psychopathic state without limiting the diagnosis is probably not being more specific than to make a diagnosis of abdominal pain. As is well known abdominal pain might have as its basis a great many conditions. In the same way a diagnosis of constitutional psychopathic state might have as a basis for this conclusion varying characteristics of widely differing nature. For this reason constitutional psychopathic state has been divided into the following types:

- a. Inadequate personality.
- b. Criminal.
- c. Sexual psychopathy.
- d. Paranoid personality.
- e. Pathological liar.
- f. Emotional instability.

These lines of cleavage are, however, not clearly defined. There is a great overlapping of the types. It is true of all that their conduct is not compatible with the well-being of the community in which they live. Considerable emphasis should be placed upon the community in which the individual lives, because that type of conduct upon which one would be adjudged as psychopathic in the refined districts of a large city, might be well tolerated in the slum districts of the same city.

#### DIAGNOSIS

In making a diagnosis of constitutional psychopathic state there are several conditions which must be differentiated. Among these conditions are mental deficiency, psychasthenia, and hysteria.

In mental deficiency, there is a more or less marked actual deficiency in intellect. This may be distinguished in numerous ways, among which the most reliable is the psychological test.

In psychasthenia or maladaptation neurosis, we have the psychasthenic stigmata both physical and psychical, the

aboulia, and the obsessions, or dominant ideas, and imperious acts, that are usually in evidence. The psychasthenic usually does not have an impairment of his sense of moral obligations, a thing which is rather marked in the constitutional psychopath.

Hysteria when typical is not of great difficulty because of the presence of outstanding conditions, as hysterical seizures, paralyses, anesthetics, the hyper-suggestibility of the patient, and the response of the condition to well-directed suggestion.

#### TREATMENT

Little can be done to improve the basic and inherent condition of the constitutional psychopathic state in the adult. Often times for the protection of society it becomes necessary to confine them to institutions prepared to care for them.

The outlook in these cases is much better if the condition can be recognized in childhood. This should be done in the public schools and the problem should be attacked from the standpoint of mental hygiene. The "opportunity room" in public schools is especially adapted to finding and correcting pathological tendencies in these children. Parents and teachers should handle these cases under the direction of skilled psychiatrists.

#### THE CRIMINAL LAW

The largest group of our criminals belong to the constitutional psychopathic group and are not considered legally insane. Of course, some are psychotic or insane but the few that are usually have some other condition super-imposed upon their constitutional condition. The criminal law as it is now enforced and applied has many objectionable features and it is at variance with the medical profession. A person may be mentally sick or be out of harmony with society and still know right from wrong. The American Psychiatric Society has gone on record as favoring a revision of criminal procedure and a good many recommendations have been made, but no definite action has as yet been taken. A few of the leading criminal lawyers also have favored some changes. Some of the states have a sanity commission which seems to function fairly well, but even so it is far from satisfactory in many cases.

Murderers are very prevalent and when one is caught and arraigned in court for trial, the defendant, as well as the plaintiff, begins to cast about for medical expert evidence, which is very easily found. Hypothetical questions are usually long and are couched in such phrases and words that it is often hard for the doctor to give an intelligent and satisfactory answer, to either side, no matter how hard he tries to be an impartial witness. Sometimes the doctor is forced to resort to some hair splitting or technical answer and sometimes to rather far fetched theories which have caused comment, and suspicion being placed upon the medical expert witness. It is hoped that some radical changes will be made in criminal procedure and relieve the physician from some embarrassing and trying positions, but until we shall have secured the full co-operation from the legal profession and until we have a clear insight and understanding among our own profession, progress along this line will be hampered and retarded.

This state like most of the others is badly in need of some revision of the law regarding expert medical evidence or testimony. This has been recognized by the American Psychiatric Association and they have adopted a report setting forth some radical changes, which we hope will be beneficial to all concerned.

Some of the things set forth in the report are as follows:

1. That the psychiatrist's chief concern is with the understanding and evaluation of the social and individual factors entering into failures in human life adaptations.

2. That crime is a designation for one group of adaptation failures, and hence falls definitely within the focus of psychiatry, not excluding certain other branches of science.

3. That those who commit crime are proper subjects for scientific study and analysis with reference to their anti-social propensities.

4. That this study includes a consideration of the hereditary, physical, chemical, biological, social and physiological factors, entering into the personality concerned throughout his life as well as merely in the specific criminal situation.

5. That the court appoint psychiatrists from a qualified list, to examine and determine the mental status of the accused.

A number of other worthy clauses are included in the committee's report to the Association.

Crime is ever on the increase and reports show throughout the country that insanity and crime has increased very rapidly for the past few years.

In the statistical report from the State Board of Administration is shown that our own county has gained in the number of insane and psychopaths rather steadily.

On July 1, 1927, the report showed 296 patients from Sedgwick County in charitable institutions sent from our county jail. Only two other counties in the state furnish more, Wyandotte and Shawnee, in the order named. We also had 171 patients in penal institutions. The jailer's report shows about 500 cases of mental diseases confined in the county jail in the past three years. This did not include the criminals but only the frank psychotics.

Until the medical profession comes to some definite solution and understanding and the legal profession realizes that crooks, criminals, thieves and murderers are a social and medical problem, we may expect to continue to have trouble and the battles between the experts will go on with but little glory to the expert, and but little benefit to society in general.

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—R—

#### Birth Control

F. W. TRETBAR, M.D., Stafford, Kansas

Paper read before Kansas Medical Society at Wichita, May 8, 9, 10, 1928.

Our every thought and action is governed by law. This is the supreme fact of the universe. Not many of us are conscious of this fact. This is deplorable. To establish a vital relationship and understanding between law and man is the goal of science. You are truth seekers. You want health and happiness. You want power—power to work, to enjoy, to know, to will and to do.



We have all known students that should learn faster and remember better, young business men and women that should earn and save more, professional people that have not reached their best, and others with ideals not yet attained. Experiments in applied psychology prove that the capacity to learn can be increased from 10 per cent to 50 per cent in the average student within a year, provided always that a normal brain exists. We need methods and laws for the practical application of the laws of heredity and prenatal culture to race improvement.

Sages, scientists, and philosophers, poets, preachers and prophets have filled the world's thought with ideas and ideals. Right willing, right desiring, right thinking in youth tend to establish the physical basis to a righteous character. This physical basis does not compel one to do right, but gives him a capacity to do so easily.

A badly built brain does not necessitate a life of vice or crime but it gives rise to and readily conducts evil impulses. Personality is not a fixed thing. It changes continually with the embodiment of new facts and ideals, efforts and activities. By our perceptions, thoughts and desires, we select the materials we build into mind and character, and by our selections determine largely our working power, our capacity to will and to do. To reach the highest peaks of success, another very important subject comes in for consideration, that is eugenics or proper selection of men and women to become parents. With no constructive law on our statute books in Kansas, very disastrous results have been achieved as to the kind and number of offspring. We must as advanced thinking citizens consider the modification of some of our laws and their enforcement. We must have some expedient or usable laws concerning Birth Control. Just as we are advocating the Basic Science Law.

Not knowing what law or laws were in our Kansas statutes, our Society took the matter up with Mr. William A. Smith, Attorney General, and this was his reply concerning contraceptives in Birth Control.

STATE OF KANSAS  
OFFICE OF ATTORNEY GENERAL  
TOPEKA

February 25, 1928.

Dr. J. T. Scott, Secretary,  
Stafford County Medical Society,  
St. John, Kansas.

Dear Dr. Scott:

Replying to yours of the 22d inst., will state that the only criminal statute which I am able to locate in regard to the prevention of conception is R. S. 21-1101, which is as follows:

"That if any publisher or other person shall by printing, writing or in any other way publish or cause to be published, or expose to sale any obscene pictures; an account, advertisement, or description of any drug, medicine, instrument or apparatus used or recommended to be used, for the purpose of preventing conception, or procuring abortion or miscarriage; or shall by writing or printing, in any circular, newspaper, pamphlet or book, or in any way publish or circulate any advertisement or obscene notice herein recited; or shall within the state of Kansas keep for sale or for gratuitous distribution any newspaper, circular, book or pamphlet containing such notice or advertisement of such drugs, medicines, instruments or apparatus; or shall keep for sale any secret nostrum, drug, medicine, instrument or apparatus named; or shall advertise lotteries, or sale of lottery tickets, such publisher or other persons violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and shall upon conviction thereof be fined not less than fifty nor more than one thousand dollars, or imprisonment in the county jail not less than thirty days nor more than six months, or both such fine and imprisonment, at the discretion of the court: Provided, That nothing in this act shall be so construed as to prevent the publication and sale of standard medical works."

Very truly yours,  
(Signed) WILLIAM A. SMITH,  
Attorney General.

Injustice to the Physician. Medical scientific investigation of the last century has kept abreast of all other advancement, yet that knowledge acquired concerning the prevention of conception in human beings must not be and cannot be used legally. Regardless of what the family physician or the special accoucheur think, or have learned from experience or scientific investigation, they dare not advise a postponement of an anticipated conception, or advise the patient that no conception is advisable and prescribe suitable means to that end, for fear of the legal entanglements. As far as the obstetrician is concerned it were just as well that he knew nothing concerning contraception for he dare not use it.

Injustice to the Mother. Since we believe in the education of girls, who afterward become mothers, we have created a motherhood class that is perhaps the

most intelligent and truth seeking that the world has ever seen.

These mothers come from the average American families, some of whose children are strong, some delicate, some under normal physically and mentally. Yet these same college bred daughters or mothers come to your office for examination and advice as to the propriety and possibility of entering into matrimony and motherhood.

And you their family physician through painstaking, physical and laboratory examinations and tests find that this person may enter matrimony but must not or cannot become a mother, at the penalty of losing her life. This person has a contracted or a deformed pelvis, making normal labor impossible. She is self supporting, does her work, pays her debts, but motherhood is proscribed by her family physician. What does her doctor have to offer her and what does he say when she accepts his verdict, and asks, "Doctor how can I prevent conception, safely and perfectly?" His hands are empty, his lips are sealed and he sends her away to shift for herself. And when she does finally become pregnant she resorts to some abortion method advised by her neighbors or friends. And in this way becomes a murderer and may even lose her life. This picture is not overdrawn, as many of you doctors well know, for you have occasionally been called upon at the eleventh hour to empty an infected uterus of its decomposed contents to save life.

Another class of cases that the writer believes should have contraceptive advice are the high school and college graduates that come up for examination that are underfed, undernourished, underclothed and anaemic. In this group we find many with acute Bright's disease, incipient tuberculosis or the beginning of diabetes mellitus. If these girls could be made to postpone marital relationship it would save many deaths. They inquire of their medical advisor how to prevent conception, if health will not permit a pregnancy at that particular time. And again the law seals the mouth of the doctor.

Why should this wife at this time not have the benefit of all the research and

scientific investigation made by medical men, and use the valuable information gathered by them, and she be permitted to postpone her period of gestation to some future safe time, thus allowing her not only to become a mother but a mother of a child that she has a reasonable right to expect to be healthy and well in mind and body.

Injustice to the Child. Since we believe in healthy mothers, we most assuredly believe in healthy children. Children to be physically and mentally well must have healthy parents. They have a right to expect that their ancestors should not be insane or feeble minded or epileptic. That they are free from tuberculosis, syphilis, Bright's disease or any other disease, which in any way would undermine health. And if this bill of rights for children is rejected or refused, let us prevent their conception, and by doing so, eliminate so many misfits in the world. Every child has a right to be wanted, and to be well born, a decent environment and a fair chance to obtain an education.

Injustice of our Present Laws to the State and Nation. The injustice of our present laws to the State and Nation is further proven by a closer study into the cost of caring for the human wrecks. The feeble minded and physically unfit in our country are increasing three times as rapidly as the desirable class. At this rate in our free democracy we would soon be outvoted and governed by inferior mental intellects.

The fact of over production of these inferior citizens added to this the work that you medical men are doing to preserve the life of undesirables, and build up the bodies and minds of weaklings, and in that way prolong the days of their existence on earth, is reason for this overcrowding that economists mention as the cause of war and pestilence.

What is true in the United States as a nation is true the world over. If Europe and Asia would have proper birth control, we would not have to accept as emigrants so many inferior persons, applying for citizenship in our country.

The population of the world at this time is 1,700,000,000 which doubles every 65 years. The available food producing



land in the world is 13,000,000,000 acres. Since it takes  $2\frac{1}{2}$  acres to feed one person a year it is significant that we are rapidly nearing the saturation point. Our birth rate in the United States is twice as high as our death rate. Our population doubles every 35 years. Preventive medicine has prolonged the average life in Kansas to about 60 years.

I will present just one more thought and I am through.

What are we as physicians doing in this matter. Since Kansas men and women have had to be leaders in many State and National movements, let us as an association do what our special calling has trained us to do. Let us work for and enact such laws as we know to be indispensable. If the saturation point of our population is being reached, let us as medical men see to it that these men and women are not less than 100 per cent efficient citizens. To whom else could the world turn for the solution of this great world problem, if not to the medical fraternity. Then let us not shirk our responsibility, let us enact such laws that we know will bring the greatest good to the greatest number of citizens. Is it not time that we reckon with the unpleasant fact that 20,000 women die annually in the United States of child birth. This single cause is exceeded by only one other and that is tuberculosis.

These deaths are largely preventable since the prenatal conditions were not properly considered.

We have had campaigns for "No more war," "No more yellow fever," "No more T. B." Isn't it about time we were having a campaign to save our mothers, prevent orphans and in that way keep our homes together.

—R—

### **When Should a Cataract be Removed?**

MORTON E. BROWNELL, M.D., Wichita.

Read at Sedgwick County Medical Society, February 7, 1928.

A problem which often confronts, not alone the ophthalmologist, but also the general practitioner, is how to advise a patient who is developing cataracts and when to counsel operation. This problem has many sides and must be approached not alone from the standpoint of the presence or lack of working vision,

but also from an economic and psychological standpoint.

In illustration of my meaning: I was recently consulted by a prominent citizen of a neighboring city, a man who had always been a leader in his community and who for the past four years had been forced to give up all his business and sit around waiting for his cataracts to ripen. He has a nuclear cataract in each eye, which does not permit him, of course, to do any close work. He is just sixty years of age, a vigorous, healthy man, but becoming more and more discouraged and feeling all the time as though he was through. He is not good company for himself or his friends. He is losing thousands of dollars a year because he is unable to work. His mental attitude is undergoing such a change that even though his cataracts did ripen in a year or two he probably would never recover his self-confidence. He has seen only one other ophthalmologist in regard to his eyes and has been constantly advised to wait even though he has been repeatedly told that his cataracts are not progressing. How should he be advised?

In this paper I purpose discussing the stage of development at which a cataract operation is indicated. This discussion will not cover the congenital or familial types of cataract but rather the so-called hard cataracts or those developing after forty years of age. Up until perhaps fifteen years ago the general creed of the ophthalmologist was, "never operate a cataract until it is ripe." With the development of the intracapsular operations and the more general use of the anterior chamber irrigator following operations in which the capsule has been opened, we find the popular trend turning toward a much broader and, in my opinion, more humane attitude as regards operating on immature cataracts.

When the cataract is developing in only one eye while the other eye is functioning perfectly, it is better to wait until the cataract is mature before performing the operation, but, after the cataract is mature, it should be removed, not alone, for the protective vision and assurance against the future should anything happen to the good eye, but also for fear lest the cataract become hyper-

mature, thus rendering the eye prone to secondary glaucoma, dislocated lens or some of the other complications of hypermature cataracts. It would be much better to operate such a cataract while immature rather than after it had become hypermature.

But now approaching the question from the angle of the binocular incipient cataract; are we justified in compelling our patients to go blind before allowing them to have their cataracts removed? Most decidedly not! We often see cases of men or women, many in their prime and others of quite advanced years, in whom the cataracts seem to progress at about an equal rate. It is my opinion, because of my own experience, that there is absolutely no reason for compelling these people to wait at all after the cataracts have progressed far enough to prevent their pursuing their normal vocations. Also, in my opinion, it is even less necessary to cause people over sixty-five years of age to suffer the loss of what use or comfort they can get from vision with the aphakic eye whether or not they are dependent on their vision for livelihood.

On going over my records of the last one hundred cataract operations I have performed, I find twenty per cent of these operations were performed on eyes with immature cataracts. Within the last three years about forty per cent have been performed on this kind of eye. Not only do I find the visual results to be as good if not better than the eyes with mature cataract, but I also find a slightly smaller percentage of secondary cataracts. The surgical results as regards cortical remnants, loss of vitreous, prolapse of the iris, iridocyclitis and delayed healing of the wound showed that the maturity of the lens had very little to do with such complications. There was only one case in which an immature cataract was removed in which there was any marked reaction to the eye. The wounds were found to heal much more readily, of course, than in the cases with the mature cataract because of the fact that the average age in those cases was much greater than in the immature cases. For the past few years, therefore, I have counseled more operations

for immature cataracts. Whenever an optical iridectomy would give useful vision I have advised and performed it, but when the vision was not materially improved with the pupils fully dilated and the patient was handicaped in his work, I have unhesitatingly performed the cataract extraction.

The following charts will show the surgical complications attendant upon mature and the immature cataracts. It will be noted that the percentage of each complication is less for the immature than for the mature except in the incidence of cortical remnants, but the variation is not great and it will be readily seen in the second chart that the visual results were much better in the immature cases regardless of complications. The failures in the immature cases were not in anyway surgical failures, as one had a central choroiditis and the other a very dense secondary, which was never needled as the patient died soon after the operation. Of course, among the nineteen visual failure in the mature cases are many with equally good reasons for failure. The cases are taken just as they come in my records.

CHART 1

|                             | Mature | Immature |
|-----------------------------|--------|----------|
| Cortical Remnants .....     | 20     | 8        |
| Loss of Vitreous .....      | 2      | 1        |
| Prolapse of Iris .....      | 4      | 2        |
| Iridocyclitis .....         | 18     | 2        |
| Delayed Healing of Wound .. | 7      |          |
| Secondary Cataract .....    | 20     | 4        |

CHART 2

|                         | Mature Cataract        |                     |          | Immature Cataract      |                     |          |
|-------------------------|------------------------|---------------------|----------|------------------------|---------------------|----------|
|                         | Combined Extraction... | Knapp Extraction... | Total... | Combined Extraction... | Knapp Extraction... | Total... |
| Vision                  |                        |                     |          |                        |                     |          |
| 20/40 or better .....   | 43                     | 8                   | 51       | 10                     | 8                   | 18       |
| 20/200 or 20/40 .....   | 8                      | 2                   | 10       |                        |                     | 10       |
| Worse than 20/200 ..... | 18                     | 1                   | 19       | 1                      | 1                   | 2        |
| Totals .....            | 69                     | 11                  | 80       | 11                     | 9                   | 20       |

My method of attack does not vary in these cases whether the cataracts be mature or immature. Regardless of the age of the patient I always attempt to perform a Knapp extraction. Of course this is rarely successful, in my hands at least, under sixty years of age and in only about half of the cases over sixty years of age do I find the zonule sufficiently



weak or the capsule sufficiently strong to allow a perfect Knapp extraction. However, if we do not succeed in removing the lens in the capsule we have lost nothing at all by making the attempt.

If the capsule ruptures I always make sure that I have removed a large piece of the anterior capsule and then, after expressing the lens, irrigate out all cortical remnants seen. If the zonule is too tough I always make sure of a generous capsulotomy.

In going over the text books on the subject I find that all of the authorities agree with me to greater or less extent, but it was a very real pleasure to me on looking up Dr. Josef Meller's opinion in his "Hand Book of Ophthalmic Surgery" to find that he concurred exactly with my opinion. I quote Dr. Meller as follows:

"When a cataract develops in each eye, the eye with the more advanced lenticular opacity is operated upon as soon as disturbance of vision has progressed to a point where the patient can no longer pursue his occupation, irrespective of whether the cataract is completely mature or not. *The extraction of an immature cataract offers as favorable conditions for good results as the extraction of a fully ripe one.*

"The probability of the retention of unclouded lens remnants, when operating on an immature cataract, is usually not much greater than in the stage of ripeness. The clinical diagnosis of maturity refers only to the anterior cortex of the lens. The posterior cortical portion may be transparent and therefore remain unobserved during the extraction, especially as it is not massaged out of the eye at once owing to its adhesion to the posterior lens capsule. If the posterior cortex is farther advanced in opacity than the anterior, the lens substance is separated from the capsule and is readily expressed by massage, while the use of the capsule-forceps to tear a large central piece of the capsule secured the same results for the anterior lens fibers. Even when greater masses of lens particles remain in the eye, they are quickly absorbed if the lens sac remains permanently opened by the removal of a

large piece of its anterior portion by the forceps. Any procedure for artificial ripening of the immature lens should be avoided, and the performance of the so-called preliminary iridectomy is of no special advantage and is only indicated in central opacity of the lens in which dilatation of the pupils consequent on the iridectomy sufficiently improves vision."

De Schweintiz in his, "Diseases of the Eye" says: "Some operators of extensive experience hold that the usual criteria of ripeness are erroneous in that period when accommodation is annulled by physiologic changes in the lens—that is, about the sixtieth year—and the lens may be extracted safely even if it is in part unclouded. It may also be done successfully at any earlier age."

He also says: "If the unripe material is not removed it may swell up and cause iritis, probably because of development and liberation of toxins. Therefore the safest plan is to wait for maturity; but if this is impossible or very undesirable or the patient is unwilling to wait until the cataract is mature, the author has been in the habit of extracting an unripe cataract after preliminary iridectomy in preference to performing a ripening operation."

In Fuch's text book of "Ophthalmology" we find the following: "Extraction gives its best results when the cataract is ripe. Hence we should put off the operation until this occurs; *provided always that the other eye also retains sufficiently good sight in the meantime.* But if the other eye also becomes so clouded that the patient is incapacitated from work, the cataract may be extracted even before it is fully ripe. Healing then takes place with as good result as in ripe cataract, except that layers of transparent cortex are more apt to remain adherent to the capsule during the operation."

De Schweinitz and Fuchs do not go so far as Meller in advising early operation, but they certainly do not take as strong a stand in favor of waiting until any cataract is mature as do many of the older observers. In all fairness to our patients and all justice to ourselves I am thoroughly convinced as to the advisability of early operation.

## Accidents During and Untoward Effects Following Lumbar Puncture

WILLIAM C. MENNINGER, M.D., Topeka

The technique of a lumbar puncture procedure is well disseminated among physicians. However, many practitioners perform it so infrequently that except for headaches they are only vaguely aware of numerous other accidents and untoward effects that may occur. The knowledge of a few practical points in this procedure, as well as the untoward effects that have been reported, may be of considerable value and consolation to the physician who has occasional recourse to lumbar puncture.

The untoward effects and accidents that follow lumbar puncture vary in their frequency with different writers from less than one per cent to thirty per cent of cases. Except for headache, mention is rarely made of other disturbing after-effects, and the present paper was suggested by a recent case which developed a hyper pyrexia of several days duration. In searching for some information regarding such a post-lumbar puncture reaction, the writer was impressed with the sparsity of such data given in text books.

Lumbar puncture is not usually considered as a procedure in which there may be much danger. The simplicity of the technique and the relative rarity of severe after-effects have made its usage quite general. Nevertheless, it seems to the writer that it cannot be too strongly urged that lumbar puncture is not an essentially harmless procedure and in no way compares with venesection. Severe untoward effects occurring during or after a procedure, which has been represented as of a trivial nature, does not tend to establish the physician in the confidence of the relatives nor in any way enhance his reputation.

On the other hand, if good technique is used and there is no contraindication for the procedure, it does not need to be regarded as dangerous. Particularly is it unwise to alarm either patients or their relatives that a major operation is about to be performed. Undoubtedly the psychoneurotic patients, because of the nature of their mental state, suffer more

severe immediate and delayed untoward effects than other individuals, suggesting a considerable psychic element in the production of these untoward effects. It is also a well recognized, though not necessarily proved, fact that active neurosyphilis cases seem much less likely to develop a post-lumbar puncture headache than other individuals.

The untoward effects and accidents may be classified for convenience into (1) immediate, viz., occurring in the course of the procedure, and (2) delayed, viz., occurring after the puncture. The type of complication of course depends somewhat on the nature of the disease for which the puncture is being performed, and there are certain definite contraindications for the procedure. In cerebral and particularly in cerebellar tumors in which there is evidence of high intracranial pressure, a lumbar puncture must be done with great care, and it should be entirely avoided in the exanthemata.

### IMMEDIATE EFFECTS

The immediate accidents and untoward effects are numerous, though usually infrequent. The majority of the untoward effects (not including accidents) occur in cases in which the intracranial pressure is excessive and the effect results from a too sudden reduction of this pressure.

1. *Syncope* is a rare event, but results most often in psychoneurotic cases. If good technique is used and the skin has been well anesthetized, the procedure may be made practically painless. With poor anesthesia, in such cases the patient occasionally faints. If the operator can be sure that all is well, the puncture may be continued, but as a general rule it is probably wisest to stop the procedure.

2. *Headache*: Not infrequently the patient will remark that he feels a little light headed. In cases of high intracranial pressure, he will occasionally complain of headache, a symptom which should indicate immediate cessation of the puncture.

3. *Nausea and Vomiting*: These symptoms occur with a headache, and when appearing during the puncture the process should be immediately stopped.



4. *Circulatory and Respiration Changes*: In every case, there is probably some acceleration of both pulse and respiration. In the event of noticeable slowing, the procedure should be stopped.

5. *Pain in the Extremities*: This is not an infrequent occurrence during the course of the procedure, and the patient complains of a sharp, tingling, shooting pain radiating down the legs. It is usually, if not always, due to injury of one of the filaments of the cauda equina. Rarely does the pain continue after the puncture, although rest in bed usually sees the passing of this condition.

6. *Puncture of Venous Plexus of Spinal Cord*: Even with the best of technique, occasionally the vessels, either anteriorly or posteriorly, are punctured or injured and bloody spinal fluid is obtained. There is a possibility that this hemorrhage may be the cause of subsequent meningismus in some cases, one might assume that the hemorrhage could be quite extensive. However, except for the fact that it is a distressing accident to the examiner in that it spoils the diagnostic examination of the fluid just withdrawn, it apparently has no very severe and often no after-effects.

7. *Breaking Needle*: The only experience the writer has had with this particular accident occurred in a very resistive patient in which the needle broke off just below the skin. This accident is likely to occur even with the best of technique and when the best of care is used in selecting and caring for the needle. It occurs more often in disturbed, resistive patients. The only solution is to resort to surgery to recover the needle end, although if deep it may be advisable to let alone awhile and if no complications occur in several days it may be left inside.

8. *Puncture of the Aorta*: This is possible, but a rare occurrence. It is more likely in children or infants, and in any case must be regarded as due to poor judgment on the part of the operator as to the depth to which the needle should be introduced.

9. *Failure to Obtain Fluid*: While failure to obtain spinal fluid is not literally either an accident or an untoward

effect of a lumbar puncture, it is a most disconcerting event to happen during the procedure. The following cases illustrate this condition:

(a) The patient, a male aged 20, gave a history of the removal of a growth on the tibia with subsequent swelling of inguinal lymph nodes, which were also removed. He developed a left arm paresis, headache, and aphasia, along with other mental changes. Repeated attempts at spinal puncture in various inter-lumbar spaces and with the patient in various positions, resulted in a dry tap and unquestionably the needle pierced the dura and arachoid membranes. At autopsy a cerebral tumor was found, but no explanation of the dry tap.

(b) A baby, 28 months old, with convulsive seizures, was punctured on four occasions without success. The snap of the dura as the needle passed through it was distinct on each occasion.

There are three explanations usually given for failure to obtain spinal fluid:

(1) A spinal block, viz., a spinal cord, meningeal or vertebral tumor above the level of the site of puncture. This undoubtedly is apparent from other signs or symptoms.

(2) A low spinal fluid pressure; the number of cases with a pressure below the normal of 50 to 80 m.m. of water are not infrequent and no doubt failure in some of these cases is due to the low pressure. In a few of these, spinal fluid may be obtained if the puncture is made in the sitting position, although the writer has even tried suction with a syringe without results.

(3) Mechanical stoppage of the outflow by a blood clot, or a tab of arachnoid; the needle may be flush against a nerve root, or inserted too far, or not far enough, into the cord. This condition can often be corrected by insertion of the stylet and rotation of the needle, or often by inserting it or extracting it a short distance. Nevertheless, so far as the writer has observed a certain number of cases including the two cited, do not seem to be accounted for by any of these explanations.

#### DELAYED EFFECTS

Delayed untoward effects are more common than immediate disturbances,

and as was stated their frequency varies with different writers. Chauffard and Boidin (un an de ponctions lombaires dans un service hospitalier. *Gaz. d Hop.* 77: 725, 1904), in a series of 223 punctures, recorded only 3 cases of vomiting and no other effects to speak of with the exception of slight headache. Nisel (*Die Bedeutung des Lumbalpunktion fur die Psychiatrie. Centralbl. f. Nervenhe., u. Psychiat.* 27: 225, 1904) encountered headache, nausea, vomiting, and in some cases complete prostration, in 48 out of 112 cases punctured. Boyd (*Physiology and Pathology of the Cerebrospinal Fluid. New York, Macmillan Co., 1920, p. 38-39*) noted marked after-effects in 25 out of 120 asylum cases, and slighter sequelae in a number more. The chief symptoms were headache, giddiness, nausea and vomiting. Perkel (*Lumbar Puncture. Presse Medical*, 79: 1320, 1925) reports 1600 lumbar punctures without accident. He was able to follow up 852 cases, however, and 322 of these presented some signs of meningismus.

1. *Fatalities*: In 1915, Schoenbeck (*Die Gefahren der Lumbalpunktion. Arch. f. Klin. Chir.* 107: 309, 1915) collected the reports of 71 fatal cases. In 15 of these, less than 5 c.c. of fluid was withdrawn. In 7 cases, death occurred immediately after the puncture, and in some it was delayed for several hours. Some of these cases may be explained by the fact that the puncture was made with the patient sitting up and the release of the fluid at the base of the brain produced a cerebral hernia. Levinson (*Cerebrospinal Fluid in Health and Disease. St. Louis, C. V. Mosby Co., 1923, p. 60-61*) states that of the "many hundreds of punctures that have come under my observation, I have seen only one case of death during puncture."

The writer wishes to present a hitherto unreported case with a fatal outcome following lumbar puncture. The patient, a male aged 40, with advanced tabetic neurosyphilis, was punctured and the fluid was under 300 m. m. of water. Only a slight amount was withdrawn and there was no immediate after-effect. He felt well through the next twenty-four hours except for a backache. He then began to develop leg cramps and the next day

developed fever which rapidly rose to 107 degrees, with loss of consciousness and death forty-eight hours after the puncture. In view of his very acute condition, it is difficult to state the immediate part played by the puncture.

2. *Headache*: The lumbar puncture headache is usually distinct from other cephalgias in that it disappears when the patient is reclining and reappears when the patient sits up or stands. Occasional cases present a headache regardless of the position.

Many causes for this headache have been suggested including the rapidity with which the fluid is withdrawn, the position of the patient during the puncture, the degree of intraspinal pressure, the disease condition, and the age of the patient. All these points are now generally regarded as unimportant. Many workers considered the cause as the removal of too great an amount of fluid at one sitting, although it has often been noted even after the withdrawal of only a few drops. Calmann (*Headaches after Lumbar Puncture. Deutsch. Med. Wchnschr.* 49: 1058, 1923) reports a case of typical headache after five unsuccessful attempts to make a lumbar puncture. He believes the headache is caused by meningeal irritation and not by loss of cerebrospinal fluid, as no fluid had been drawn in this case. MacRobert (*The Cause of Lumbar Puncture Headache. J.A.M.A.*, 70: 1350, 1918) has suggested that the headache may be due to the non-closure of the puncture hole in the arachnoid. The arachnoid tissue in a case of this kind is pulled through the dural opening when the needle is withdrawn. This results in prolonged epidural leakage and in the lack of support of the medulla a condition which gives rise to severe headache. The headache results from the sudden heightened intracranial pressure due to the rise of pressure in the cerebral veins; its entire relief when the patient lies down is due to the fall of pressure when the weight is removed from the veins on the clivus. In the course of a week the puncture wound heals, the fluid is rapidly made in sufficient quantity to fill and distend the entire sac, and the integrity of the brain cushion, or water-bed, is re-established.



The headache, which was a purely mechanical affair dependent on the loss of that cushion, is gone. This explanation sounds plausible though it is not clear just how the puncture hole prevents the cerebrospinal fluid seepage in the large number of cases which do not develop headache.

The typical lumbar puncture headache usually appears within a few hours but is often delayed for thirty-six to forty-eight hours and occasionally for several days. In many cases in which it occurs, it is only mild and twenty grains of sodium bromide or ten grains of aspirin are sufficient to relieve it. Occasionally it may be very severe and lasts from several hours to two weeks. In such cases there are likely to be other signs of meningismus, such as slightly stiff neck, weak Kernig reaction, etc. One of the most severe protracted cases is here presented:

An epileptic girl of 16 was punctured without difficulty and about 8 cc. of spinal fluid removed. She developed a severe headache about six hours after the puncture and on every attempt to lift her head for twelve days she complained of this headache. She had to remain in the hospital fourteen days and on discharge still complained of a slight headache.

3. *Vomiting*: This symptom, and more commonly nausea, is not an infrequent occurrence in every case showing severe headache. The following case illustrates this untoward after-effect:

A male of 35, an epileptic, in which there was no appearance of headache until two days after the puncture when he left the hospital. His headache was severe and he vomited on every attempt to put food in his stomach. He tried to work but his headache, vomiting and asthenia forced him to return on the sixth day to the hospital. On reclining, his trouble disappeared. He was discharged on the twelfth day after the puncture and had no further trouble.

4. *Fever*: In only two cases has the writer seen a severe febrile reaction to lumbar puncture. It is generally recognized that many cases will show a slight febrile reaction of one, two, or even three degrees during the first twelve

hours, but very exceptionally does it persist over a longer period nor become higher than 101 degrees. The following case, recently seen, stimulated the writer to review this general subject:

A girl, aged 13, with a history of three months' illness, beginning with an influenza attack and suggesting encephalitis. At the time of the puncture, the patient had been bedridden for five weeks, showing a pupillary convergence defect, radicular pains, unequal kneejerks, emotional instability, insomnia, and mutism. She had not had a temperature over 99.4 degrees during two previous weeks of observation. A lumbar puncture was made at 9:00 a. m., without difficulty, withdrawing 5 cc. of fluid, which was contaminated with blood. At 4:00 p. m. the patient complained of pain in her back and legs, and the temperature had risen to 102 degrees. It remained around 103 degrees for forty-eight hours and rose on the third day to 104.2 degrees, returning temporarily to normal on the fifth day, to rise to 102 degrees on the sixth and seventh days, and finally reaching normal on the ninth day. She complained of a headache for the first three days. It was considered at the time, in view of the cough and absence of meningitis symptoms, that the fever might be a concomitant influenza which cannot entirely be ruled out. The patient presented a bilateral Kernig sign for a few days, but no stiff neck.

The second case developed a fever of 102.4 degrees within twenty hours after the puncture, along with a headache of moderate severity. The temperature persisted twenty-four hours and was again normal on the third day.

5. *Vertigo*: Apparently this is a transient as well as uncommon sequela. The writer has observed it particularly in cerebral tumor cases in which it is inclined to be very protracted and very difficult to alleviate. The following case illustrates:

A woman, aged 50 years, with signs and symptoms suggesting an early cerebral (cortical) tumor, developed a severe headache twenty-four hours after the puncture. The headache gradually changed to a dizziness and the slightest motion of her head caused her marked

distress. This dizziness continued eleven days before she could move about in bed and fourteen days before she could leave the hospital. She did not vomit at any time and ran no fever.

6. *Torticollis and Neck Pain*: This condition, when it appears, shows itself within a few hours after the puncture and may persist several days or longer. The patient complains of a stiff neck and often a severe pain in the posterior deep neck muscles.

7. *Edema of the skin in the lumbar region* is infrequent. Levinson records two cases in which it occurred. The author observed it in one case, a boy with cerebrospinal meningitis, in which repeated spinal punctures were done for intraspinal serum injections. In this case, after very definite improvement in the meningitis, this area of edema at the site of the puncture wounds developed a staphylococcus abscess, which further progressed to a septicemia and death.

#### SUMMARY

Lumbar puncture should be regarded as a simple procedure which even with best of technique may be accompanied with and followed by accidents and severe untoward effects. During the course of the procedure, one may encounter syncope, headache, nausea and vomiting, circulatory or respiratory changes, pain in the extremities, puncture of the spinal canal blood vessels, breaking of the puncture needle, puncture of the aorta, entire failure to obtain fluid, and rarely, death. Any of these many untoward effects may persist. In addition, vertigo, fever, torticollis, and edema of the skin around the puncture region may develop. Case illustrations are cited of several of these conditions, including one fatality.

—R—

#### **Acrodynia (Swift's Disease), a Pathologic Study of One Necropsy**

C. K. SHOESTALL, M.D.

Department of Pathology

Numerous reports have been reviewed in the last seven years of a distinct clinical picture characterized by red hands and feet, sensory disturbances, prostration and restlessness, occurring usually in infants and children. Various names have been suggested such as Swift's dis-

ease, acrodynia, erythredema polyneuritis, epidemic erythredema, etc. In 1914, Swift of Adelaide, Australia, reported 14 cases presenting the same clinical picture giving the term erythredema to the disease. In 1921, Wood of Melbourne, Australia, stated that he and his predecessor Snowball had noted the same condition for many years previously classifying them all under the term "raw beef hands and feet." Bilderback in 1920 reported ten cases before the North Coast Pediatric Society at Seattle, under the title "A group of cases of Unknown Etiology and Diagnosis." These are the first on record in the medical literature of the United States. Weston of Columbia, S. C., after studying Bilderback's cases carefully to exclude pellagra, reported them at the New Orleans meeting of the American Medical Association in 1920 under the title of "Acrodynia." Since that time there have been over two hundred and eighty cases reported, all of them more or less alike in their clinical picture.

Weston has made a thorough study of the French literature, especially the epidemic character of this disease occurring in the early nineteenth century in France and even before this time in Italy, from which study he asserts that we are not dealing with a new disease but one which has existed for a long period of time. With the Australian and more recently the Canadian and American accounts it appears as if this disease is taking its place as a distinct clinical entity of unknown etiology.

#### SYMPTOMS

In well advanced cases the patient is abjectly miserable. In bed the patient curls up into rather characteristic attitudes, usually lying on the back with the knees drawn up to the chest or lying on the back or side with the face between the feet. There is in nearly all cases a rash consisting of papules on an erythematous background starting on the abdomen, extending to the back, legs and arms and persisting usually longest on the hands and feet. Paresthesia and pain of the hands and feet with itching are nearly always present. The patient early is restless later becoming almost maniacal throwing and tossing itself



about the bed continually. The reflexes may be increased or diminished. The child is sleepless and cries out many times during the night. Loss of teeth and hair is quite a constant and characteristic finding. Perspiration is marked; frequently there is diarrhea and less often constipation; coryza in many cases is seen. The hands and feet are usually cold and clammy and appear swollen although there is no edema; intense itching and parasthesia is very characteristic. Bilderback's six "p's," pain, pink hands and feet, peeling, prostration, parasthesia and perspiration sum up the most constant findings.

There are several dramatic changes or occurrences such as the sudden loss of teeth that the day before were apparently perfectly sound; this we believe can be partially explained by the constant biting and pulling which the child in its miserable condition seems constrained to do. Apparently painless fractures of the extremities as in our case may occur. Biting and laceration of the hands and fingers are very striking.

#### LABORATORY

Red blood cells are slightly decreased and the white count ranges from 7000 to 21000 depending upon the presence or not of any intercurrent infections. The urine contains a small amount of albumen, pus cells and in our case a trace of sugar. The Wassermann and Pirquet reactions are negative. The spinal fluid does not show any increase in cell count or pressure.

#### PATHOLOGY

Paterson and Greenfield in 1923 reported 5 cases giving exhaustive pathological findings in two of the cases. Their conclusion is that there is pathological evidence of peripheral neuritis and of chronic inflammatory changes in the spinal cord and nerve roots, in which the sensory nerve fibers are affected more than the motor. Warthin in 1926 reporting the study of two cases from autopsy findings concludes that "the essential pathologic changes in these two cases would appear to be: extreme edema and slight meningeal irritation of the central nervous system, chronic erythema of the skin with hyperkeratosis of the rete, occurring in children of the hypoplastic

lymphatic constitution, with associated or terminal respiratory infections and gastro-intestinal catarrh and inanition." Pathological reports and biopsies have been given also by Chown, Butler and others.

#### ETIOLOGY

Four main hypotheses have been advanced: first, that it is a deficiency disease. This is difficult to prove or disprove. Its close resemblance to pellagra is very suggestive. Second, that the disease is a neuritis following upper respiratory infections. Third, that it follows focal infection. Marked improvement has followed the removal of infected teeth, tonsils and other foci of infection. Fourth, that it is an allergic phenomenon as advocated by Helmick. The first three, however, in the order named, have had the strongest support.

#### DIAGNOSIS

Owing to the emphasis frequently placed on the resemblance of this disease to the infantile type of pellagra its differentiation is important. Acrodynia occurs at any season; pellagra usually commences in the spring or fall. Acrodynia shows no tendency to recur, produces a less persistent rash than pellagra, typically involves the body in an erythematous or papular rash, seldom produces a severe diarrhea, does not occasion insanity but produces most acute wretchedness associated with the marked itching and burning not present in pellagra. Finally, acrodynia ultimately terminates in recovery, whereas in pellagra there is a comparatively high mortality.

#### TREATMENT

Unfortunately we have no definite treatment for the disease and such palliative measures as atropine for the perspiration and calamine lotion for the irritation of the skin constitute the treatment. Owing to its close relation to pellagra it is well to give a balanced diet rich in vitamins. As the child often refuses any and all food the stomach tube and gavage must not be withheld too long. The usual sedatives are not recommended.

#### REPORT OF CASE

History—V. S., age 2, white, male, admitted to Bell Hospital on December 26, 1927. The onset was 5 months previous

to admission. At home the child complained of being tired and became restless at night. A few days later a rash beginning over the face developed over the entire body and lasted four days. The appetite was poor. There was a marked change in disposition; the child, usually of a bright, cheerful nature, suddenly became restless, never smiled and appeared miserable. Three weeks later he passed some worms and was given a vermifuge which overcame the condition. A week later the palms of his hands and soles of his feet began to itch intensely and became swollen and broken out. Gnawing at the finger tips apparently caused him no pain. The only discomfort he seemed to feel would be from a string or a raveling which worried him for he would always grab either and twist it or put it in his mouth and pull. About three weeks after the onset he perspired profusely and drooled at the mouth especially at night. During the first two months his posture in bed was unique; when put on the bed he would raise up, turn around, sit on his feet and knees and put his head back and fall backward toward the foot of the bed. Later he began to sit on the bed and drop his head between his feet, the only way he would sleep. He could not stand alone and refused to walk.

During the first part of the second month of illness he would pull the hair out in bunches. Later two teeth came out apparently from the constant pulling on strings and ravelings. He was more or less constipated throughout the illness and passed a considerable amount of mucus. There was no history of photophobia. His memory remained exceptionally good throughout. The urine showed a trace of sugar for which he was given insulin. Several days before admission both bones of the left forearm were found fractured. The child did not complain of this and the mother could not account for it. The past history is essentially negative with the exception of an attack of measles from which he made complete recovery.

#### PHYSICAL EXAMINATION

The patient is undernourished and emaciated: the cheeks hollow and pinched. Tonsils slightly enlarged and

pharynx reddened. The hands appear swollen but do not pit on pressure; the right hand is swollen more than the left and the skin is very rough and fissured with excoriations on the thumb. The left hand did not show such marked changes. Both feet and hands show a typical bluish-pink color. The entire body was covered with a vesiculo-pustular eruption which seemed to itch severely and caused the child to be constantly scratching and rubbing. There was marked phimosis. Examination of the lungs gives an impaired percussion note at left base with decreased breath sounds. The heart was apparently normal.

Laboratory—The urine showed a small amount of albumen and a slight trace of sugar. The Wassermann was negative as was that of the father and mother.

The temperature on admission was 100.2°, pulse 110 and respirations 22. The patient died suddenly the night of his admission into the hospital.

#### AUTOPSY

The body is that of an emaciated male white child about 3 years old. The hands are dry and scaly and have a pinkish cast. The right thumb shows excoriations on the palmar surface and the other fingers to a lesser extent are scabbed and scaled. The skin of the feet is dry and desquamating especially on the palmar surface, with a few excoriations about the tarsal-metatarsal junction; the pinkish cast is not present here as on the hands. There is a grayish-brown mucopurulent discharge from the nares. Several teeth are missing, including the two upper central incisors. The bones of the knee and ankle appear hypertrophic and there is evidence of swelling on the dorsum of the feet. There is a fracture of the lower ends of both bones of the left forearm with consequent swelling of the tissues about the wrist and up to the elbow. The skin is dry and scaly in appearance especially over the abdomen and the subcutaneous tissue is scanty.

On opening the abdomen the liver edge is seen to extend 2 cms below the costal margin; there is no free fluid in the abdominal or pleural cavities.

Organs—The heart showed nothing unusual with the exception of the presence of an atheromatous plaque on the endo-



cardium just below the aortic valves. The lungs show patchy areas of consolidation especially in the lower lobes. The large bronchi contain a blood-tinged mucopurulent exudate. The liver shows cloudy swelling. In the spleen on cut section the malpighian bodies are obscure. The pancreas and adrenals are grossly negative. The kidneys are rather firm and the cortex is slightly swollen although the boundary line between cortex and medulla is distinct. The thymus is atrophic and shows the presence of a considerable amount of fibrous tissue dividing the organ into small lobules. Ureters and bladder grossly negative. The right testicle is undescended lying in the canal just above Poupart's ligament. The mesenteric and tracheal lymph nodes are swollen. In the gastro-intestinal tract nothing unusual was noted with the exception of injection of the mucosa. In the brain, on removing the calvarium the vessels over the brain are congested and there is a great excess of fluid beneath the dura. The convolutions were flattened.

#### HISTOLOGICAL PATHOLOGY

Heart—There are a few mononuclear leucocytes about some of the vessels. The myocardium is of the infantile type; cross-striations are obscured. The lungs show a bronchopneumonia; localized areas of atelectasis and edema are seen. The liver shows cloudy swelling and periportal round cell infiltration and fibrosis of moderate degrees. There is atrophy of the lymphoid elements of the malpighian bodies in the spleen and exhaustion of the germ centers; the stroma is increased in amount and passive congestion is rather marked. The pancreas showed nothing unusual. The thymus shows a marked diffuse fibrosis with an atrophy of the lymphoid elements; the Hassal's corpuscles are not numerous and those present show a coarse granular disintegration. Some of the sinusoids are distended and contain swollen degenerated phagocytes. The thyroid, adrenal and testicle show nothing unusual. Section through the cortex of the brain shows congestion of the vessels of the pia with some granular eosin staining material between the pia and the brain. Section through the small intestine and

stomach shows considerable congestion of the mucosa and desquamation of moderate degree of the epithelial cells. No sections were taken of the skin, bones, muscles or nerves.

#### PATHOLOGICAL DIAGNOSIS

Terminal bronchopneumonia with pulmonary edema and purulent bronchitis; atelectasis; edema of the meninges and brain; catarrhal gastritis and enteritis; hypoplasia of the lymphoid tissues with exhaustion of the germinal centers; parenchymatous degeneration of the myocardium, liver and kidneys; ulceration and excoriation of the extremities; chronic bilateral hypertrophic arthritis (knees); undescended right testicle; fracture of both bones of the left forearm.

#### COMMENT

An interesting feature here was the persistent trace of sugar in the urine leading to a diagnosis of diabetes and the administration of several injections of insulin before admission to the hospital. The patient died the night of admission, however, affording but little opportunity to carry out the desired laboratory work. It is well known that glycosuria is occasionally present in late stages of starvation and extreme inanition.

Bronchopneumonia was the cause of death. The prognosis is, however, uniformly good in a large majority of the cases reported, hence autopsy reports have been few. Edema of the brain has been noted in Warthin's cases as well as our own and is probably due to the toxemia present. The nervous instability as evidenced by the paresthesia, peculiar position in bed and at times almost maniacal state may be accounted for, by the edema of the brain and meningeal irritation. The atrophic thymus and general hypoplastic lymphoid constitution have been noted in Warthin's cases as well as our own.

That acrodynia is a juvenile form of pellagra is rather difficult to disprove. Careful search into the history of this case gives no indication that there was a faulty diet; the parents of the child were unusually intelligent in their management of the case from the first. It appears, however, that these patients are problems in feeding from the onset, and



they require early forced feeding by the rectal or stomach tube.

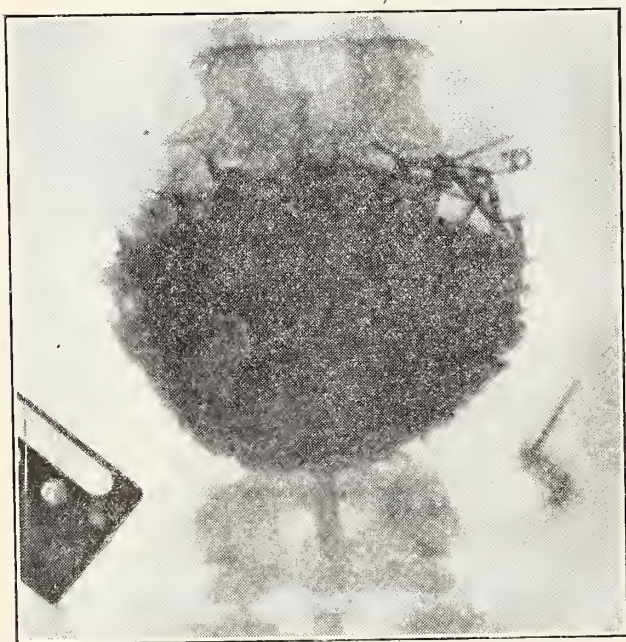
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## Hardware in the Stomach

FRANK FONCANNON, M. D., Emporia, Kan.

T. K., white male, age 42, came to my office complaining of slight pain in the epigastrium. He stated that he was with a carnival, then visiting our city, and that he earned \$40.00 per week swallowing nails, open safety pins, light bulbs and other nicknacks. He stated that these miscellaneous razor blades, etc., passed from him with each defecation. I suggested



an x-ray and hoping to get a good picture told him to return after he had had a hearty meal of his favorite hardware. He returned next day saying that he believed that he would make a fair showing but to be sure he swallowed a package of phonograph needles, two open safety pins and a few bill-poster's tacks in my office. The accompanying x-ray is evidence that the man was not faking.

When he discovered the "cumulative effect" he was getting he gave up the nail

swallowing and by the copious use of mineral oil and the elevation of hips while in bed at night he was able to rid himself of the accumulation of ostrich food. He wrote me several weeks later saying that he felt fine and that his stools were normal.

## TUBERCULOSIS ABSTRACTS

The quest for a cure for consumption is probably as old as history. Koch raised hopes of finding a specific cure in tuberculin, the concentrated media of broth cultures of tubercle bacilli. His failure has since been followed by numerous others. In the files of the National Tuberculosis Association there are today records of 680 "cures" some that give pause to thought, some ingenious, but most of them ridiculous. Meantime, rest, fresh air, and good food have been established as the tripod on which the treatment of tuberculosis depends. Lately rest has been so unanimously emphasized by clinicians who specialize in tuberculosis that it might be regarded as the pillar of successful treatment, while fresh air, good food, artificial pneumothorax and other therapeutic devices might be considered as supplementary supports.

### Rest Is Relief From Strain

Rest may mean the sloth of the indolent or the relief from tension that follows change of occupation, says Allen K. Krause. Therapeutically, however, rest represents relief from strain. Treatment must aim to limit and confine the activities of tuberculous foci and to reduce to zero or a minimum the absorption of harmful focal products. At any time, undue stress may stir quiescent foci into renewed activity. It is axiomatic that uncontrolled movement of a diseased or injured part will promote the spread of the disease and delay recovery. To stop the progress of tuberculous foci is to cure tuberculosis.

Fever, fatigue, loss of appetite and other constitutional symptoms of tuberculosis are manifestations of intoxication resulting from absorption of focal substances. The rate and capacity of this absorption depend on the circulatory and respiratory activities of the body. Rest



brings about a diminution of physiological demands and reduces the amount of focal absorption.

Rest for the sick man is a better "tonic" than exercise. As a result of prolonged rest, the appetite returns, the fever falls and a sense of well-being sets in, while depleted reserves are built up, thus assisting in the healing of foci. Rest is a potent medicine, to be prescribed according to the requirements of each individual case by a physician who understands its use.

The febrile, acutely ill cases must have absolute bed rest for at least two weeks after the temperature has returned to normal. After the constitutional symptoms have disappeared, the patient must



Of all the countless remedies, rest alone has stood the test of time.—Gerald B. Webb

still be kept below the fatigue line. The fatigue line is an individual affair, registered only in the patient's own consciousness. The duty of the physician is to explain to the patient why relief from strain is important. But there can be no set formula for the individual patient; he must rely on his own intelligence and behavior. Rest should be so engraved on the patient's mind that he will automatically respond with rest to the first symptom of fatigue.

Sanatorium treatment is vastly more satisfactory for the majority of patients since rest and discipline and the means of insuring these are more readily obtainable there. The sanatorium, moreover, teaches and trains the patient how to care for himself.—*Rest and Other Things*, Allen K. Krause, Williams and Wilkins Company.

### Food Requirements and Fresh Air

Good nutrition is important, but "stuffing" the patient, as formerly practiced, is a mistake. Over-eating is like clogging an engine with unburnt carbon by using too much fuel. Sometimes, the appetite must be cajoled. Three good meals a day, two or three glasses of milk (with or between meals), one or two eggs a day, are often sufficient to add enough to the patient's weight to bring him the gain wished for. A good general rule is that the least amount of food that will enable any patient who is underweight to gain up to and slightly beyond the normal weight is the optimum diet for that patient.

Fresh air as a "cure" for tuberculosis has probably been overemphasized by the laity. It is, however, an essential aid to recovery. Outdoor air is a mild and beneficial stimulant. Sleeping out of doors does not necessarily hasten recovery, provided eight to ten hours a day are spent in the open air and the night passed in a well-ventilated room. Mere dryness of the air is of little avail. Temperature, humidity and air movement determine the quality of indoor ventilation.—*Rules for Recovery from Tuberculosis*, Lawrason Brown, Lea & Febiger.

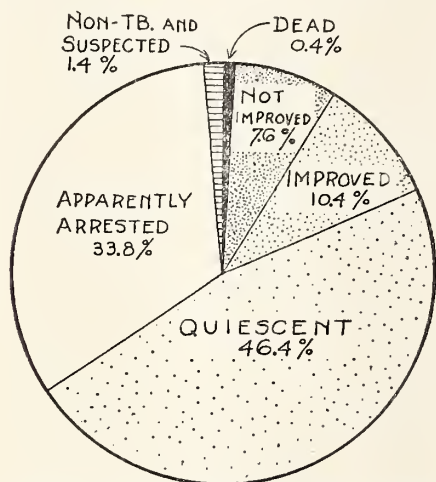
### Disposition of Patients

Patients may be divided into three groups as far as treatment is concerned:

1. Suspects, cases under observation, and those in which the diagnosis is not definite, can be treated at home or fall into groups (2) or (3). The patient is on trial and more radical measures, such as going to a sanatorium, may be, and very likely will be, necessary. In a few cases of this group, sanatorium or hospital treatment, if it can be obtained at once, is of great value educationally and otherwise and entirely justified in instances where adequate home treatment is not possible in order to clear up a diagnosis.

2. Cases in which the diagnosis is definite and in which the disease is progressive, with or without a positive sputum, should be sent to a sanatorium or hospital at once and should remain as long as the physician considers it neces-

sary. This is the ideal to be sought for in the great majority of cases. Home treatment may be substituted (a) when there are no children in the family who might be exposed to the disease in the



Condition on discharge of 222 patients who remained over 90 days (average 229 days) at Trudeau Sanatorium, 1925-26.—Annual (1926) Medical Report of the Trudeau Sanatorium

open form, (b) when the intelligence of the patient or his family is such that adequate carrying out of details is assured, (c) when good nursing and medical service is available and (d) when there are facilities for proper outdoor treatment.

3. Arrested, apparently arrested and quiescent cases need close medical and nursing supervision if the good done at a sanatorium is to be permanent. Home treatment may be satisfactory for the majority of these cases. Frequent visits to the home by the nurse and monthly consultations should be required. The amount of work done and the choice of employment are to be decided by the physician. The patient should know that it may become necessary at any time for him to return to the sanatorium when indications of an impending breakdown occur.—*Diagnostic Standards Pulmonary and Glandular Tuberculosis of the National Tuberculosis Association, Seventh Edition, November, 1926.*

#### Climate and Altitude

There is no specific for the cure of tuberculosis. Climate is not a specific. Altitude is not a specific. \*\*\*No physician, therefore, is justified in advising a change of climate unless he knows that

the patient's financial status will enable him to command the essentials. To put it categorically, if a little arbitrarily: proper medical supervision, sanatorium regime, either in a sanatorium or in the home, reasonable contentment of mind and intelligent co-operation count ninety or ninety-five per cent of effective therapeutics; climate and change of environment count five or at the utmost ten per cent. Why, therefore, sacrifice the ninety or ninety-five per cent for a five or ten per cent in those cases who can not command the one hundred per cent? On the other hand, if the patient can afford to go to a first class sanatorium or secure the services of a good phthisiologist in a more salubrious climate, and will be reasonably contented away from home, by all means he should be urged to avail himself of the full one hundred per cent of these efficacious measures.—*Louis C. Boisliniere, Journal of the Outdoor Life, February, 1928.*

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#### American Association for Study of Goiter

The American Association for the Study of Goiter, consisting of internists, pathologists, radiologists, etc., as well as surgeons will hold their Fifth Annual Conference on Goiter, in Denver, Colorado, June 18, 19 and 20.

Several men from foreign countries have signified their intention of attending. Professor Breitner of the Von Eiselsberg Clinic, Vienna, and Professor Albert Kocher of Berne, Switzerland, have accepted places upon the program.

Addresses and discussions on prophylaxis, medical treatment, endemic goiter and cretinism from the public health standpoint, are on the program for the first afternoon.

Pathology, various phases of surgical treatment, etc., will be considered the last two afternoons.

All members of state medical societies are invited to attend.

Dr. Gordon S. Fahrni of Winnipeg, Canada, is the president, and Dr. Kerwin Kinard of Kansas City, is vice president.

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What we know that can be done and what we can do constitutes our intelligence.



# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - Editor**

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### THE ANNUAL MEETING

The annual meeting of the Society, which was held in Wichita May 8, 9 and 10, had an attendance of 425 and that is more than twenty-five per cent of the membership. That shows that the program was an attractive one and that Wichita is a popular meeting place. The papers presented received more than usual attention and there was always a large and appreciative audience. The discussions were pointed and appropriate.

There was more or less turmoil in the meetings of the House of Delegates. Much of this seemed to be the result of local and personal antagonisms and misunderstandings. The amendment to the Constitution providing for an increase in dues and requiring a two-thirds vote of the delegates present, was defeated by two votes, there being thirty votes for and twenty-two against.

There seemed to be a good deal of misinformation among the delegates that could have easily been corrected had the subjects been brought out in the meetings. There seemed to be a very general

impression that two-fifths of the annual dues goes into the defense fund. This point could have been readily clarified by reference to the Constitution. Article XIII, Section 2, reads: "The sum accruing from two dollars per capita of the annual membership dues of the Society together with any additional funds specially appropriated, and together with any unexpended residue from previous appropriations for the same purpose shall be set apart and constitute a Medical Defense Fund. . . ."

It so happens that at the present time two-fifths of the annual dues does go into the Defense Fund, because two dollars is two-fifths of five dollars, the amount of dues now collected.

There seemed also to be considerable misinformation about the functions of the Bureau of Public Relations. This, however, was to be expected for the functions of this Bureau are, and are supposed to be, directly concerned with the lay public rather than the members of the Society. It was natural that the delegates should fail to appreciate the amount or the extent of the work until a report had been made.

A rumor became current to the effect that the executive secretary of the Bureau received a salary of two hundred dollars per month. In face of the facts this was so absurd that neither the officers or members of the Council deemed it necessary to correct it. The House of Delegates at the Hutchinson meeting voted an appropriation of two hundred dollars per month for the expenses of the Bureau and made no provision for a salary for the secretary. This money was expended entirely for clerk hire, stationary and printing and postage. With this amount of money to spend the Bureau prepared, printed and mailed thirty thousand pamphlets and circular letters, prepared, printed and mailed an

article each week to seventy newspapers in the state, maintained a correspondence with eighty-four members of a statewide campaign committee, besides a considerable correspondence naturally required in the conduct of such a department. If there was an opportunity for the executive secretary to get any of that appropriation he did not find it out.

However, when a motion to abolish the Bureau of Public Relations was put to a vote it failed to pass, in fact received only a few votes. So that the Bureau will be continued and the plans suggested by the House of Delegates at the Hutchinson meeting will be carried out as far as it is possible to do so.

It has been the custom for a good many years to designate the annual meetings by number and this one just held was called the sixty-second meeting which is incorrect by any method of calculation. The annual meeting was designated by number for the first time in 1882, according to the records, and that meeting was called the sixteenth annual meeting. But the Society held an annual meeting in 1866 and in every year thereafter so that the meeting in 1882 was really the seventeenth and the meeting held in Wichita was the sixty-third—if the first three meetings of the Society are ignored. On the same date that the articles of incorporation were approved, February 10, 1859, a meeting was held and Dr. S. B. Prentiss was elected president. The second meeting was held at the Eldridge House in Lawrence on February 23, 1860, and Dr. J. P. Root was elected president. The third meeting was held on the last Thursday in February, 1861, and the minutes were read, but no election of officers was held. There were no meetings then until April 3, 1866, and this was the fourth annual meeting. According to the records of the Society the meeting just held at Wichita was the

sixty-sixth instead of the sixty-second. There can be no good reason for ignoring these first three meetings, in fact it is unwise to do so for at least the first of the three was required by the terms of our charter under which we still operate.

There have been sixty-six annual meetings of the Society and of these, twenty-one have been held in Topeka, eight in Kansas City, seven in Lawrence, six in Wichita, five in Leavenworth, four in Atchison, three in Hutchinson, two each in Fort Scott, Emporia, and Salina; and one each in McPherson, Winfield, Concordia, Ottawa, Pittsburg and Iola.

In 1895 the Constitution was amended to provide that Topeka should be the annual meeting place and the Society met in Topeka each year until and including 1900. During the annual meeting of that year the Constitution was again amended, providing that a meeting place should be selected each year. Six successive meetings of the Society seems to have convinced the Topeka members that the old plan was the best, at any rate they gave this last amendment hearty support.

Topeka has been honored with the presidency of the Society twelve times, Kansas City seven times, Leavenworth six times, Wichita five times, Lawrence four times, Fort Scott three times; Concordia, Osawatimie, Beloit and Peabody, each two times; Atchison, Osage City, Pittsburg, Horton, Newton, Salina, Columbus, Oswego, Hutchinson, Norton, Mt. Pleasant, Junction City, Manhattan, Paola, Olathe, Winfield, Ottawa, Emporia, Ellsworth, Clay Center, Larned, each one time.

Only once in the history of the Society has a president been reelected. In 1879 Dr. C. C. Furley was elected to succeed himself.

One who was in attendance as a spec-



tator rather than a participant remarked upon the apparent indifference of the members in adopting resolutions. Without attempting to comment on the merits of any of the resolutions adopted at the last meeting, it seems timely to suggest that all resolutions should be read at the first meeting of the House of Delegates and referred to a committee for investigation and recommendations, before final action is taken. Then, at least, the criticism could not be made that resolutions were adopted without an effort to find out about the matters concerned. On hearing a resolution read one gets an idea of its general import, but may overlook something of importance in its wording or some of the things implied and may vote for a resolution that on more careful thought and investigation he would oppose. There were probably no resolutions adopted at the last meeting that would not have been adopted after the report of a committee such as suggested, but that offers no assurance that such a thing may not happen in some future meeting.

#### THE COST OF MEDICAL CARE

A committee of forty-two, composed of fourteen physicians in private practice, six public health officers, eight representatives of institutions and organizations, five prominent economists and nine representatives of the public, with Dr. Ray Lyman Wilbur as chairman, will spend five years in studying the cost and adequacy of medical care, the expense to the community of hospitals and clinics and the return accruing to the physician, the dentist, the nurse and other agents. When all the facts have been discovered the committee will make some recommendations "not on opinions but on facts."

The findings of this committee, no matter what they are, will be of considerable interest to the medical profession.

Although fourteen of the forty-two members of this committee are presumably engaged in private practice, it is a safe prediction that the independence of the private practitioner will be involved in any solution of the problem of the high cost of medical care that is offered.

In this part of the country at least, doctor's fees have not increased in proportion with the cost of living or with the cost of doing business. Nor have doctor's fees increased in the same proportion as have wages of laborers, skilled or unskilled. Still the cost of sickness has increased much out of proportion to the cost of other things. It costs poor people no more to be sick now than when a dollar would buy twice as much, and they have better medical care than ever before. It does cost wealthy people more to be sick. However, they can afford it and there is more to be had for their money than ever before. It is the people of moderate means that feel the burden of the high cost of sickness, or medical care if you like. But the increase adds nothing to the doctor's income, in fact it frequently adds to his loss. When people with moderate incomes have paid the hospital and the nurse they have nothing left for the doctor. This is an experience the physicians in hospital towns are becoming very familiar with.

During the past fifty years the hospitalization of sick people has grown more and more popular, but it has also grown more and more necessary. People are not satisfied with the neighborly nursing of the old days, nor is it so available. They demand now the efficiency of a trained nurse. But our manner of living has so changed that the services of a trained nurse are frequently impossible in the home. Even in the smaller cities a large per cent of the population is domiciled in hotels, apartments and boarding houses, where the attendance of a trained nurse and her care, if

it could be provided for, will cost considerable more than hospital care.

Sentiment also plays some part in this high cost of medical care. When a man's wife or a woman's husband is taken to the hospital, the appearance and comfort or location is given more consideration than the cost in the selection of a room, even though the patient may not be in a condition to observe or be influenced by either. If the case is at all serious a special nurse will be requested when in many instances the regular hospital nurse would be able to render all the service necessary. In a great many instances the extra service and the extra expense serve only to increase the satisfaction of the relatives and friends.

The physician is frequently told by relatives that his patient must have the best room in the house, as many nurses as can be used, the highest priced consultation or the best surgeon, no matter what the cost, and finds in the end that his own bill is regarded as robbery and probably never paid. He may learn to regard these exuberantly sympathetic relatives with little enthusiasm.

When a man says that his wife had to have an operation and by the time he had paid the hospital, the nurse, the surgeon and the laboratory fees it had cost him \$5,000 one wonders where and how he spent the other \$4,000 or \$4,500 of it.

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### CHIPS

"Health is simply a matter of diet and drainage." So says the great English surgeon, Dr. Lane. The late Dr. Holmes is reported as saying: "If all medicine was thrown in the ocean it would be better for the human race, but hard on the fishes." When a doctor, and more particularly a surgeon attains a certain independence of restraint he is likely to say many fool things he would not dare to have said before he had been boosted to the height.

According to the Public Health Nursing Service of the Red Cross, "the hospitals of the United States have a total value of \$5,000,000,000 with a daily maintenance cost of \$3,000,000" and that is some budget.

Sound waves are said to be longitudinal and compressible and are comparable to water waves. They can be reflected, refracted and diffracted.

The newspapers seem to have the idea that the complaint made by the Society against the Director of Athletics at the University was due to his being an osteopath. If some member of the faculty of the medical school should announce and give a course in electrical engineering the Department of Engineering at the University and all the graduate civil engineers in the state would object, and that would be readily understood by the newspapers and everyone else. With a finely equipped medical school teaching everything worth while in medicine and surgery, it seems just as inconsistent for a member of the athletic department to attempt to give a course of instruction on fractures and dislocations.

In the May number of the Archives of Pathology, Pinner, Knowlton and Kelly, reported the results of some studies to determine the prognostic value of the sedimentation rate of erythrocytes. Their findings indicate that the blood of persons in perfect health not infrequently have a sedimentation rate higher than the usually accepted normal values, and that the fluctuations are much greater than usually reported to be. They could determine no quantitative relationship between the fibrin content of the blood and the sedimentation rate in clinical tuberculosis, under normal conditions or during slight physical disturbances. Although a higher average rate was found in active tuberculosis than under normal conditions, the increase was far from constant and was not parallel with extent and progressiveness of the lesions. They conclude that the prognostic value of the test is minimal, and with rare exceptions is not apt to furnish information beyond that gained by clinical and bacteriologic observations.



Since 1920 occasional reports have appeared concerning the effect of irradiation of the spleen with roentgen rays on asthma. In the May number of the Archives of Internal Medicine Waldbott has tabulated 171 cases reported by various men. Favorable results were reported in 120 of 171 cases in most of which the clinical data were very indefinite. Waldbott, in this article, reports eighty-one cases with clinical data. Of these, twenty-one patients were symptom free for at least six months, twenty-five were temporarily relieved and thirty-five did not respond to treatment. While these results seem encouraging a six months symptom free period in an asthmatic means very little in estimating the value of a therapeutic measure, and temporary relief means practically nothing.

An enterprising Topeka druggist recently mailed to all the physicians in town an announcement of the opening of two branch stores, soliciting their prescription work and assuring them that there should be no substitutions. The circular letter was typed on his regular business stationery and at the bottom of the letter the following line appeared: "Try the drug store first."

Schlueter and Weidlein reported the results of extensive studies of lung abscess in the February number of the Archives of Surgery. Pathologically there are two types, the bronchiectatic abscess originating within the air passages and the parenchymatous abscess originating in the parenchymatous tissue. In the first type infection is introduced by way of the air passages, in the second by way of the blood stream. The evidence developed in their work seemed to indicate that postoperative lung abscess belongs to the parenchymatous class, and that it results from embolism produced by the dislodgment of an infected thrombus from the vessels of the operative area. Certain facts are cited in support of their conclusion. The frequent development of lung abscess after operation in infected or potentially infected fields, nose and throat operations and operations on the gastro-intestinal tract; the high percentage of occurrence after operations in mobile operative

areas; the not uncommon occurrence after operations under local anesthesia; failure of improved methods for inhalation anesthesia to prevent the occurrence of pulmonary abscess; the greater frequency of lower lobe involvement; the symptom free period frequently following the operation; the sudden pain in the chest that frequently constitutes the initial symptom; the rare occurrence of lung abscess when foreign bodies are lodged in the air passages; the unsuccessful attempts to produce lung abscess by introducing infected material into the air passages; the comparative ease with which lung abscess can be produced by the intravenous injection of infected material.

### R The Function of a Medical School— A Letter

Dr. W. E. McVey,  
Editor State Medical Journal.

The editorial of Dr. Wahl on the "Policy of the Medical School" in the last number of The Journal presents matters of so much importance to the school and to the physicians of the state, that it should be read and considered very carefully. If the policies he advocates are the correct ones, and the problems he presents are real ones, we as a profession should do all within our power to see that these policies are carried out and these problems solved. If, on the other hand, we cannot agree with him I know of no reason why we are not entitled to state wherein we disagree and to indicate the policies we think should be pursued. I have no desire to be considered hypercritical, but there are some statements and some conclusions in this editorial that I cannot let pass without a protest, and if they represent opinions held generally by the faculty and by those in authority the physicians of Kansas should have the opportunity of examining these disagreements and drawing their own conclusions.

There are just two phases of this editorial that I wish to notice briefly, viz. the function of a medical school and some of the problems Dr. Wahl mentions as having arisen in connection with the operation of the school.

In discussing the function of a medical school, he starts out well enough by saying "The primary function of the school is an educational one, that of training young men and young women in the complex and technical professions which are to safeguard the health and physical well being of the citizens of the state." But he soon abandons this position and adds other activities such as the construction and operation of hospitals, the treatment of the sick, the care of charity patients, the rendering of personal services to the citizens of the state; and he considers that each of these presents a medical school problem of sufficient importance to determine the policy of the institution. One must conclude that his primary function is primary only in the sense that it is primarily mentioned, and not that it is of primary importance. Indeed, in the very sentence in which he states the purpose of the school he begins to digress by intimating that the training of nurses is equally important with



the training of physicians. Now we do not consider this conception of the function of a medical school to be the correct one. Strictly speaking, we do not think a medical school has functions. It has a function and that function is the creation of physicians. All its other activities are secondary and are simply means for the accomplishment of its purpose, and are to be considered only as they influence the character and work of the product. We know that in this program of making doctors, we must have patients to use as clinical material for teaching purposes, and hospitals to house them and nurses to care for them and training schools for the nurses and physicians to co-ordinate all these activities and determine the treatment, but we insist that each of these agencies is only a certain part of the machinery in the factory where the valuable product is made. We feel very sure that any policy that is more concerned with the machinery than with the product is wrong. And we are equally sure that the majority of these problems presented as facing the institution grow out of this wrong conception of the function of a medical school, held either by those in charge of the institution or by the physicians of the state who, Dr. Wahl says, ask favors of the school which is no part of its duty to grant. Each of these problems can be solved very easily, in fact, will solve itself, by a recognition of the fact that not only is it the primary function of a medical school to create physicians, but it is its primary and chief function to such an extent that all other activities and purposes are mere details. If it would not be considered a repetition we would like to suggest that there are numerous hospitals in Kansas that do all these secondary things that are done in our medical school such as erecting and equipping buildings, ministering to the sick, giving charity service, training nurses, appointing physicians to treat the patients, and do them equally well, but they are not medical schools. There must, therefore be something other than these activities that determines the medical school. What can it be but this specific act of creating physicians?

In considering these problems which we are told are facing the institution, we have a right to ask if they are problems that concern themselves with the legitimate function of a medical school, or do they refer to some minor function not necessarily of special importance, or are they present because some one has confused his own private interests with those of the school? If they belong to the first class I feel certain that I can assure the authorities of the school that the profession will aid in whatever way it may to see that these problems will be correctly solved. If they belong to the second class we can leave their settlement to politics. Politicians you know must have something to do to justify their existence. If they belong to the third class mentioned possibly the best thing we can do is to explain them so that every one will see the merits of the problem and understand that some of our energy has been expended in activities in no way connected with the legitimate purposes of a medical school. We have time to discuss only one of these problems and it belongs to the third class. We refer to the problem growing out of the establishment of orthopedic clinics at different points over the state. That my position may be perfectly clear I shall quote in whole the paragraph of the editorial dealing with this so called problem. "Criticism also is made of the orthopedic clinics being held over the state under the auspices of the School. This is evidence of the natural conflict of interests between a specialist and of

the people of the district concerned. These people help to support the Medical School and have a right to its services if they insist on it. The attitude of the School is that it should afford such services to these communities if it is with the approval and co-operation of the local medical organization. There are occasions when an effort to serve the public apparently conflicts with the desires of some members of the profession."

Dr Wahl considers the criticism of the policy that established these clinics to constitute the problem. We do not so consider it. We think they were started from a mistaken conception of the function of a medical school, and if they constitute a problem that problem is the fact that someone had a selfish motive and an advantage was taken of the opportunity to further personal interests under the guise of a medical school activity. Almost as bad as the policy, is the fact that the Dean of the school should defend these clinics with such feeble arguments as he employs in the quotation above. I think I understand the English language and the meaning of words, sufficiently at least, to comprehend the general idea sought to be conveyed and the insinuations contained in this paragraph. If Dr. Wahl did not refer to my personal objections to these clinics and intimate that these objections were due to a selfish motive, his choice of words was unfortunate. If he did mean me, I should like to ask him why I should not have the right to object? If any one, by any stretch of his imagination, can see how these clinics have any possible connection with the teaching of medical students at Rosedale, he might be able to understand and sympathize with such a policy. To one whose imagination is not so elastic it is quite evident, where the selfishness enters.

Every one knows that the patients seen at these clinics are not used as clinical material at Rosedale, and under existing conditions there is no provision made to take them to Rosedale, unless those interested in the clinic pay the expenses of such removal. And every one also knows that it is impossible to properly treat these cases by seeing them no oftener than once a month. If these clinics are necessary in four towns why not in a dozen other places? And if they are established in all these places and visited once a month by the professor of orthopedics where will he find time to teach his special line of medicine to the students? And if some assistant is to help, which is to be the recipient of his valuable services, clinic or students? And finally, do not imagine that this concerns only the orthopedists of the State. If these clinics are continued and others formed how long will it be before it will occur to someone that he should have an eye clinic somewhere in the state and to another that he should have a gynecological clinic and so on ad nauseam. Let me be thoroughly understood in the matter. There never was any necessity for these clinics. They were started because of the spectacular appeal that crippled children make to every one's sympathy and advantage was taken of this fact to add to the prestige of certain faculty members in each of these communities. We are not so naive as to imagine that these reputations will be a matter of interest only to charity patients.

The editorial says that the people support the institution and have a right to its services, if they insist upon it. All such talk about the taxpayers having a right to demand this and that in the way of personal services, and the necessity of bribing them with such services so as to justify in their



minds the spending of the pitiful sum spent on the institution, is nonsense, pure and simple, and makes me, as the old colored mammy said "Entirely lasitudinous." When the medical school turns out every year thirty or forty or possibly fifty well trained, high class physicians and sends them out over the state to take care of the health and lives of the citizens of Kansas, it has justified its existence, and paid in full all the obligations it owes to the taxpayers of the state, and when we begin to emphasize this fact and explain the dignity and worth of the service rendered and insist that no other expenditure of money pays such dividends, and meanwhile limit our endeavors to legitimate activities and quit playing cheap politics, it will not be necessary for us to beg for appropriations for the school or to raise problems that are no problem except as they affect some one's private interest.

We are about done, but we should like to ask what is meant in the last paragraph of the quotation when he says "Occasions may arise when the efforts to serve the public 'apparently' conflicts with the desires of some members of the profession?" Does he mean when patients of some physician are approached by agents of these clinics and are told that it is unnecessary for them to continue under the care of their doctor, because they can receive better care in the clinic from the professor of orthopedic surgery of the medical school at Kansas City who comes every month, that this is only an apparent conflict? And make no mistake, this very thing is the logical result of these clinics. It has happened and will happen again and again if this policy is continued.

Personally we are sorry that it has seemed to us necessary to get into this controversy, but we are not responsible for these evils, and then we are assured by the Dean that he welcomes constructive criticism, meaning probably what is generally meant by this term, that it will be considered constructive if it agrees with the policies advocated by him. However that may be, we are offering these suggestions in the hope that they may aid in accomplishing the result which we all desire, a position of great usefulness for our school.

E. D. EBRIGHT, M.D., Wichita, Kan.

### **The Banquet Question**

Ottawa, Kan., May 23, 1928.

Editor Journal::

I hope the men of Salina will have sand enough to stand by the result of the vote taken at the Wichita meeting in which it was voted that there will be no more free banquets. I think that on at least three other occasions this same vote has been taken, but the boys in the city in which the next meeting is to be held do not want to inaugurate a much needed reform. Even in the larger cities it is putting an unnecessary burden on the home men, which load falls heavily on a few of the most willing and generous, who when the fireworks are over, must foot the bills.

There are several of the smaller towns that as far as accommodations are concerned could easily house the society if it were not for the matter of entertainment, so these cities have refrained from asking the society to meet with them.

Pesides the members of the State Society are in the habit of paying their way when they go from home and I am sure all will be glad to relieve the good sports in Kansas City, Topeka, Wichita, Hutchinson and Salina, who have so generously entertained us in the past. So as I

said in the beginning, I hope the Salina boys will stand pat and assume that we really meant it.

If it is not out of place I would like to suggest that at the next meeting a resolution be introduced to raise the annual dues a dollar and that that dollar be used to pay for the entertainment at the State meeting. This would be ample to care for the entertainment and provide sufficiently for the expenses of the very best talent of those abroad whom we might invite to participate in our program.

Yours very truly,

J. R. SCOTT,

Pres. Franklin Co. Medical Society.

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### **Symposia in Exhibits**

Scientific Exhibits, while forming one of the great educational factors of any medical gathering, are, ordinarily, confusing in the wealth of material presented, and quite often exploit the individual exhibitor and his work to the detriment of real cohesive educational value. In this regard the arrangement of the Scientific Exhibits for the Annual Fall Conference of the Kansas City Southwest Clinical Society is to be especially commended.

The following Symposia have been arranged for the general program:

Feeding Problems in Children.

Diseases of the Gall Bladder.

Special Problems in Obstetrics.

Surgery of the Prostate.

Peptic Ulcer.

Traumatic Surgery.

The various specialties which touch upon these subjects will group their Scientific Exhibit, and the general order of the exhibit will follow in sequence parallel to that of the general program. As an example, the subject of "Peptic Ulcer" will be dealt with from the standpoint of the scientific exhibit as follows:

1st. By the clinician, including the laboratory experience, charts of chemistry and graphic illustration of the chemical factors to be considered in Peptic Ulcer.

2nd. Peptic Ulcer from the standpoint of radiology. Their classification, routine, special methods of recognition and evaluation.

3rd. From the standpoint of treatment, both medical and surgical, with a graphic representation of the end results to be expected, by both medical and surgical treatment of the lesion.

The various subjects will be dealt with

in a similar manner as the example described above, the total effort being to construct a Scientific Exhibit which will graphically portray the lesson intended by the exhibitors.

## R SOCIETIES

### STAFFORD COUNTY SOCIETY

Society met in St. John Thursday evening, April 12. Members present: M. M. Hart, Macksville; C. S. Adams, Byers; F. W. Tretbar, J. J. Tretbar, W. L. Butler, Stafford; R. E. Stivison, L. E. Mock, J. T. Scott, St. John.

Dr. R. H. Grieve of Turon was the guest of the Society. Ladies present: Messrs. Adams, Mock, Butler, Stivison, Scott.

This was one of the best attended meetings of the new year. The papers, one on Pneumonia and the other on Birth Injuries, were splendid presentations and were discussed by every member.

On motion the Secretary was ordered to communicate with Congressman Hope and request him to support the Fitzgerald-Tyson, or Emergency Officer's Bill now before Congress, having been passed by the Senate.

In as much as our regular May meeting conflicts with the State Meeting it was decided to dispense with this meeting and all go to Wichita.

The June meeting, on the second Thursday, will be a public meeting and will be held in Stafford. Several Public Meetings will be held in the larger towns of the County during the summer and addresses of semi-public nature will be delivered. We import speakers for the majority of our meetings and think it insures better attendance. Our members are requested to bring their wives, and luncheon is served immediately preceding the program.

This meeting continued from eight to eleven p. m. and there was evident a fine spirit of professional friendship.

We are again fortunate in the selection of a President, Dr. F. W. Tretbar, who recognizes and fulfills the responsibilities. Our membership is small but what we lack in numbers is amply replaced by enthusiasm. The program follows:

1. Pneumonia..Dr. R. H. Grieve, Turon  
Discussion opened by Dr. J. T. Scott, St. John
2. Birth Injuries..Dr. R. E. Stivison, St. John  
Discussion opened by Dr. W. L. Butler, Stafford  
Jack and Jill went up the hill,  
A drink to buy or beg,  
Jack fell down and broke his crown,  
It must have been Boot-Leg.  
J. T. SCOTT, Secretary.

### SHAWNEE COUNTY SOCIETY

The Shawnee County Medical Society held their regular monthly meeting at the University Club in Topeka on Monday evening, April 2. The following program was presented:

Dr. J. N. Beasley—"Major Syndromes of Cardiac Failure."

Dr. W. M. Mills—"Surgical Treatment of Peptic Ulcer."

The report of the special committee, which was presented at the February meeting of the society and published in the March number of the Journal of the Kansas Medical Society was brought up for final consideration.

In the discussion it was brought out that the City Health Department did furnish medicine free of charge for indigent patients. It was also shown that the City Health Department in numerous newspaper articles had made a request that only those who could not afford to pay a private physician for immunization or vaccination should come to the City Health Department for treatment.

In accordance with the resolution providing for the appointment of a committee, Dr. Boggs, President, designated the following: Dr. Milton B. Miller, Chairman; Dr. James G. Stewart, Dr. John H. O'Connell.

EARLE G. BROWN, M.D., Secretary.

### SOLOMON VALLEY SOCIETY

The Solomon Valley Medical Society, which is composed of Mitchell, Osborne, Lincoln and Ottawa counties, met at Osborne on March 28, as guests of the Osborne County Medical Society. The program consisted of talks by Dr. Welker of Kansas City, Missouri, and Dr. John A.



Dillon of Larned.

W. W. WELTMER, Beloit, Secretary.

#### GOLDEN BELT MEDICAL SOCIETY

The annual meeting of the Golden Belt Medical Society was held in Abilene April 5. The following program was presented.

1:00 p. m. The Golf Game Starts

3:00 p. m. Business Session

3:30 p. m. Clinical Cases

4:00 p. m. "A New Idea Concerning the Function of the Skin"—Dr. J. N. Dieter, Abilene, Kansas

5:00 p. m. "Nausea and Vomiting of Pregnancy"—Dr. Buford G. Hamilton, Kansas City, Mo.

6:00 p. m. Dinner

7:30 p. m. Election of Officers

8:00 p. m. "Spinal Nerve Pain Simulating Visceral Disease" (Case Histories. Lantern Slides)—Dr. Geo. E. Knappenberger, Kansas City, Mo.

9:00 p. m. "Problems in Bone Surgery" (Lantern Slides)—Dr. W. E. Mowery, Salina, Kansas.

#### SEDGWICK COUNTY SOCIETY

The Sedgwick County Medical Society held its regular meeting April 17. There was a clinic at Wichita Hospital in the morning and early afternoon and in the evening the regular meeting at Hotel Lassen.

The following program was prepared.

Morning session at Wichita Hospital.

9:00 Perineal Repair—Dr. C. H. Briggs.

9:00 Hysterectomy for Fibroids—Dr. E. S. Edgerton.

10:00 Tonsillectomy—Dr. T. W. Cheney.

10:00 Cholecystectomy—Dr. E. S. Edgerton.

11:00 Tonsillectomy and Adenoidec-tomy—Dr. O. G. Hutchison.

11:00 Kidney Conditions in children, with Autopsy specimens and Radiographs—Dr. R. W. Hissem.

Afaternoon Session at the Hospital.

1:00—Laboratory Diagnosis of Syphi-lis, Mr. J. D. Kabler.

1:30—Differential Diagnosis of Tuber-culosis, "Perthes or Leggs" Disease, and Infective conditions of the Hip, Dr. E. D. Ebright.

2:00—Clinic on Heart Diseases, Dr. Drew Luten, St. Louis, Mo.

Evening program at Hotel Lassen.

Dinner—6:30 p. m.

In addition to the regular meeting of the Sedgwick County Medical Society the paper of the evening was given by Dr. Luten upon "The Uses and Abuses of Digitalis."

Round Table Discussion of the days work led by Dr. E. H. Terrill.

#### SEVENTH DISTRICT SOCIETY

The Seventh District Medical Society met at St. Rose Hospital, Great Bend, Friday, April 20, 1928. On account of threatening weather the attendance was not as large as sometimes. However, 34 registered, representing eight counties.

The officers of the Barton County Society had arranged the program, which was furnished by four men from Wichita, each being present to fill his place. It was as follows:

Prostatic Hypertrophy—Dr. Dewey H. Cooper.

The Cancer Problem—Dr. M. O. Nyberg.

Some Roentgenographic Phenomena of the Gastro-Intestinal Tract—Dr. Donovan Showalter.

Prevention of Deformities in Anterior Poliomyelitis—Dr. A. E. Bence.

Some clinics were furnished Dr. Bence which added to the interest. General discussion and questions followed each subject.

The Barton County Society entertained those present at dinner at the Great Bend Country Club at 6:30 where a pleasant time was enjoyed by all.

Officers chosen for the coming year are: President, Dr. G. E. Paine, Hutchinson; Vice President, Dr. H. C. Embry, Great Bend; Secretary-Treasurer, Dr. H. R. Ross, Sterling.

Hutchinson extended an invitation for the October meeting which was accepted.

H. R. Ross, Secretary.

#### SEDGWICK COUNTY MEDICAL SOCIETY

The following resolutions on the death of Dr. Thos. J. Carter, a member of Sedgwick County Society, were adopted by the Kansas Medical Society in session at Wichita, May 10, 1928.

Whereas, on May 7, 1928, in the Providence of an all wise and just Creator, death came into the home of one of the members of our honorable profession, and removed from our midst Dr. Thomas J. Carter;

Whereas, he had practiced his profession in Wichita and Sedgwick County for eleven years, that he was an active and highly respected member of the Kansas Medical Society, that he was an honorable, ethical and conscientious physician and surgeon, that he was entirely worthy of, and enjoyed the confidence of his colleagues, that he was highly respected and loved by his patients, friends and neighbors, that he was generous, unassuming, courteous and pleasing in his attitude toward others;

Therefore, be it resolved by the Kansas Medical Society in session at Wichita that in the death of Dr. Thomas J. Carter this society has lost a faithful and trusted member, this city and community an honorable physician and citizen; that we greatly deplore his untimely death, and express our sincere sympathy to his widow and family.

Be it further resolved, that a copy of these resolutions be sent to his family, to the daily papers of this city, and to the Journal of the Kansas Medical Society.

#### IN MEMORY OF DR. CARTER

Our friend, Dr. T. J. Carter's work is o'er,  
We never shall see him any more,  
His work was always work well done,  
And any hour of day or night it begun.

His life was one we did admire,  
His example of life was one to inspire,  
In us, a thought for nobler deeds,  
And not for selfish gain or greeds.

His memory will always with us stay,  
His teachings going on from day to day,  
In rightful paths he daily walked,  
And wisdom's ways he wisely talked.

We've said to him a long farewell,  
And who shall greet him first we cannot tell,  
Put there on Canaan's brighter shore,  
He smilingly will greet us all once more.

If we but follow day by day,  
As closely in the narrow way,  
As hourly and daily he did live,  
And unto Christ our praises give.

SOL M. EDGERTON.

#### LYON COUNTY MEDICAL SOCIETY

The Lyon County Medical Society met

at Emporia on April 3. Dinner was served and Dr. J. A. Woodmansee, president, called the meeting to order at seven-thirty.

Dr. J. R. Pusey and Winifred Wooster were favorably reported by the Board of Censors and admitted to membership.

The committee on Library for the Newman Memorial Hospital reported and two dollars was asked from each member of the society living in Emporia, which will be added to the funds already in the Treasury and shall be expended for such recent books as the committee should select.

After a delightful reading by Beth Fulton, who is the youngest daughter of Dr. J. A. Fulton of our society, a paper was presented by Dr. E. A. Reeves of Kansas City on "The Problem of the Occipito—Posterior."

After a very interesting and helpful discussion of the paper the society adjourned to meet May 1, 1928.

M. A. FINLEY, Secretary.

#### CLAY COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Clay County Medical Society was held at the Clay Center Municipal Hospital May 15, 1928. The program of the evening consisted of a lecture entitled, "Low pain in the back," by Dr. Frank D. Dixon, Kansas City, Mo. The subject was very ably handled and the lecture was thoroughly enjoyed by everyone present.

X. OLSEN, Secretary.

#### RICE COUNTY MEDICAL SOCIETY

The Rice County Medical Society's officers for the coming year are: President, Dr. M. Trueheart, Sterling; Vice President, Dr. Maggie L. McCrea, Sterling; Secretary-Treasurer, Dr. H. R. Ross, Sterling; Delegate, Dr. A. W. Schmidt, Lyons.

The January meeting was held in Sterling and the February and March meetings in Lyons. At the March meeting the Dentists of the county were asked in and a program was given of interest to each profession. Dr. Robinson of Great Bend and Dr. Paine and Dr. Du-pray of Hutchinson furnished the pro-



gram. The meeting proved a success from every angle.

March first Dr. P. P. Trueheart of Sterling retired from active practice after fifty-two years in the harness, selling his interests to his son, Dr. M. Trueheart.

Dr. Trueheart came to Sterling in 1878 and has noted the many changes that have taken place in the country thru the years and the changes in medical practice as well. A celebration was held by the society two years ago in his honor on completing fifty years of practice.

The society has no meeting in April on account of the meeting of the Seventh District Medical Society at Great Bend on April 20 which will be held at St. Rose Hospital at 2 p. m.

H. R. Ross, Secretary.

—R—

### Deaths

John N. Halliday, Wellington, age 51, died April 6, in Wichita, of acute dilatation of the heart, following thyroidectomy. He graduated from McGill University Faculty of Medicine, Montreal, Quebec, Canada, in 1902. He was a member of the Society.

Henry A. Barber, Lenexa, aged 80, died April 4, of carcinoma of the liver. He graduated from Eclectic Medical Institute, Cincinnati, in 1868.

Samuel S. Haggard, Wichita, aged 78, died suddenly March 31, of cerebral hemorrhage. He was licensed in 1901.

John L. Heller, Topeka, aged 72, died April 12, of chronic nephritis. He was licensed in 1901.

—R—

### MEDICAL SCHOOL NOTES

Dr. Frank C. Neff, head of the Department of Pediatrics, attended the meeting of the Congress of Physicians and Surgeons, and the American Pediatrics Society, in Washington, D. C., the first week in May.

Dr. Robert M. Isenberger, Associate Professor of Pharmacology, leaves the first of June for three months of research work with Dr. L. C. Rowntree at the Mayo Clinic.

Dr. R. H. Major and Mrs. Major sailed May 5 for a two months' tour of Europe.

Dr. Major will study while abroad. They intend to return about July 15.

Dr. J. E. Foltz, Hutchinson, Kansas, Dr. H. G. Welsh, Hutchinson, Kansas, and Dr. W. B. Spalding, Kansas City, Kansas, recently visited the Bell Memorial Hospital and the Medical School. Dr. W. B. Spalding has just recently completed a Surgical Residency in the St. Luke's Hospital, at Philadelphia, Pennsylvania.

Dr. O. O. Stoland, Professor of Physiology, and Mr. C. J. Weber, bio-chemist of the Department of Medicine, recently attended the meeting of the American Federated Societies of Experimental Biology, at Ann Arbor, Michigan, where they read papers.

Dr. Russell Haden, Professor of Experimental Medicine, attended the organization meeting of the Central Society of Clinical Research, at Rochester, Minnesota, on April 19.

Dr. Thomas G. Orr, Professor of Surgery, attended the meeting of the Oklahoma State Medical Association, at Tulsa, Oklahoma, May 18.

Dr. Logan Clendening was the representative of the Medical School at the inauguration of President Robinson of the College of the City of New York.

Dr. H. R. Wahl, Dean of the Medical School, gave a talk on "Laboratory Problems" at the meeting of the State Laboratory Association at Wichita.

The Senior Class '28, of the Nurses' Training School, held its graduation exercises at the Bell Memorial Hospital, May 14.

Dr. Fred Angle, M. '26, who has been in the naval service, recently returned to Kansas City, Kansas, where he expects to practice. Dr. Angle has been stationed at Brooklyn, and just before his return finished a three months' cruise in the canal zone and Cuba.

—R—

### BOOKS

Brain and Mind, or The Nervous System of Man, by R. J. A. Berry, M.D., etc., Dean of the Faculty of Medicine and Professor of Anatomy in the University of Melbourne. Published by The Macmillan Company, New York.

The author attempts to show that the manifestations of the healthy mind result from combinations of brain cells, and that if from any cause whatsoever these cells are deficient in number, or are in an unhealthy condition, aberrations of the mind will probably result. Individuals who have an imperfect or immaturely developed brain are unable to react to their environment in a normal manner. Given the environment they may degenerate into the more serious departures from structural normality which is called insanity. He says that insanity is seldom a disease, but is rather an inability to react normally to a normal environment, and this inability is in many cases of purely physical origin.

*The Use of Symptoms in the Diagnosis of Disease* by Hobart Amory Hare, M.D., Professor of Therapeutics and Diagnosis in Jefferson Medical College, Philadelphia, etc. Ninth edition revised. Published by Lea and Febiger, Philadelphia. Price \$5.50.

The author stresses the importance of symptoms in diagnosis. The value of laboratory methods is recognized but these should not supplant the study of symptoms. He discusses the symptoms first, then their application to the determination of the disease. The work is carefully planned and generally well adapted to the requirements of the practitioner.

*Obstetrics and Gynecology*, by Joseph B. DeLee, M.D., and John Osborn Polak, M.D. Practical Medicine Series, 1927. Published by The Year Book Publishers, Chicago.

This volume represents the progress that has been made in these subjects during the past year. The Practical Medicine Series is under the editorial charge of Charles L. Mix, M.D., and volumes covering the progress in the various departments of medicine are issued every year.

*The Medical Clinics of North America* (Issued serially, one number every other month.) Volume 11, Number 5, (Tulane University Number, March, 1928,) Octavo of 261 pages with 35 illustrations. Per Clinic year, July, 1927, to May, 1928. Paper \$12.00; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

The clinical reports in this number are supplied by the staff of Tulane University. Among the subjects discussed in the clinical reports may be found: Malarial hemoglobinuria, health exami-

nations, internal mycosis, sickle cell anemia, the leucocytes, the value of the obstetric history in making a diagnosis of syphilis, oil of chenopodium for internal worms, the relationship of cryptorchidism to endocrinology, red cell diameter estimates in anemias, treatment of paresis by malaria, soduku and tryparsamid, hypertrophic osteoarthropathy, effects of antitoxin on the leucocytes in diphtheria, meningococcal meningitis treated with cisternal puncture, echinococcus cyst of liver and peritoneal cavity, atypical tuberculous adenitis, rheumatic fever, residuals of epidemic encephalitis, diverticulitis of large bowel.

*International Clinics*, Volume I, thirty-eighth series, 1928. Edited by Henry W. Cattell, M.D., in collaboration with numerous others. Published by J. B. Lippincott Company, Philadelphia.

There are some very interesting articles on some very interesting subjects in this number. Phillips of Cleveland discusses visceroptosis and its treatment. Strandberg of Stockholm has a very interesting article on the change in the picture as a result of the augmentation of vascular and nervous symptoms and the cause thereof. Westergren, also of Stockholm, discusses the importance of the sedimentation reaction in some acute infectious conditions. Barker of Baltimore presents a case of intestinal amebiasis and syphilis. Crabbe, of Copenhagen, presents some cases of chronic epidemic encephalitis. Reid of Boston has an article on bacterial heart disease. Then there are a number of interesting articles on surgical subjects. In this number is the last one of four papers on medical history—The renaissance by John Rathbone Oliver of Baltimore.

*The Surgical Clinics of North America* (Issued serially, one number every other month.) Volume 8, number 2. (New York Number—April, 1928) 256 pages with 90 illustrations. Per Clinic year (February, 1928, to December 1928.) Paper \$12.00; Cloth \$16.00. Philadelphia and London. W. B. Saunders Co.

Erdmann describes his operative procedures in fibroid uterus and also discusses gall bladder operations. Lillianthall discusses tuberculosis of the lungs and demonstrates two methods of apicolysis. Moorhead describes arthrotomy for knee joint arthritis, a case of fracture of head of radius, physiotherapy



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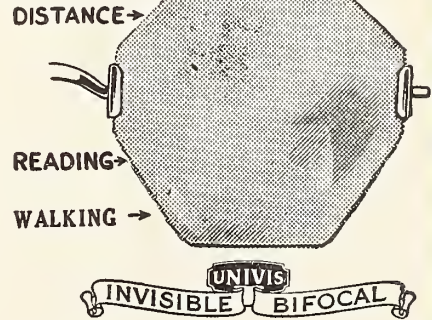
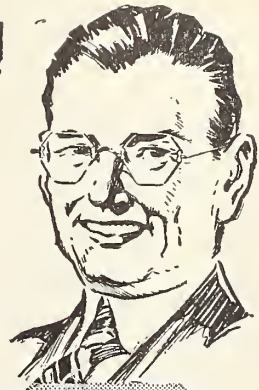
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after injury, and plaster block splints. Beer has a clinic on prostatic hypertrophy. Sheehan shows a series of cases operated on for facial disfigurement. Selinger's clinic is on chronic appendicitis. Strauss and Globus present their observations on a series of cases of brain tumors. Kramer's subject is bronchoscopy in pulmonary suppuration. Pugh discusses urinary obstruction. Dudley presents a series of interesting surgical cases. Gottesman has a clinic on cancer of the breast. Gratz, Wright and Mackenzie discuss the medical and surgical treatment of arthritis. Colp and Findlay have a clinic on fractures of the humerus.

**Gonococcal Urethritis in the Male, For Practitioners.** By P. S. Pelouze, M.D., Associate in Urology and Assistant Genito-Urinary Surgeon at the University of Pennsylvania. Octavo volume of 357 pages, illustrated. Cloth \$5.00. Philadelphia and London: W. B. Saunders Company, 1928.

The author disclaims any intention of making this a textbook on gonorrhea. He thinks, however, that the facts that are known about this disease may be more properly arranged and more correctly interpreted than seems now to be the case. There has been too much neglect of discoverable or deducible facts and too much blundering in treatment.

**A Manual of the Practice of Medicine.** By A. A. Stevens, M.D., Professor of Applied Therapeutics in the University of Pennsylvania. Twelfth edition, Revised. 12mo of 657 pages, illustrated. W. B. Saunders Company, Philadelphia and London: 1928. Cloth, \$3.50 net.

The fact that this little book has reached a twelfth edition indicates that there is a demand for it. It hardly seems possible that very much of the science of medicine could be revealed in so small a book. However, condensed information is sometimes more desirable and more useful than elaborate treatises. The author has carefully revised the various chapters so that as much of the latest developments is presented as space permits.

**A Textbook of General Bacteriology.** By Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Ninth Edition, thoroughly revised. Octavo of 778 pages with 191 illustrations. Philadelphia and London. W. B. Saunders Company, 1928, Cloth \$6.00 net.

The author has made some additions and some changes in this edition. The

chapter on parasitic protozoa has been rewritten. New matter has been added on the bacteriology of scarlet fever, erysipelas and rheumatic fever. Considerable change has been made in the chapter on the bacteriology of water. He has endeavored to bring the work up to present day knowledge of the subject.

**A Textbook of Biologic Assays** by Paul S. Pittinger, Ph.G., Instructor in Biologic Assaying, Philadelphia College of Pharmacy and Science, etc. Published by P. Blackiston's Son and Co., Philadelphia. Price \$3.00.

Because of the fact that no chemical method of assay of certain drugs had been developed, it was proposed to try out these drugs on animals and note the effects. From the results observed the strength of the preparation is calculated and definite standards adopted. U. S. P. X. requires such assays for a considerable number of drugs. This book gives in detail the methods for making these biologic assays.

**Aluminum Compounds in Food** by Ernest Ellsworth Smith, Ph. D., M.D. Published by Paul B. Hoeber, Inc., New York.

Some years ago a considerable amount of literature appeared on the subject here discussed. Much of it was apparently advertising propaganda of rival baking powder manufacturers. Finally the subject of aluminum in food was studied by a referee board appointed by the government and several years were devoted to experimental work. This book presents the work carried out by the author together with some details of the investigations made by the referee board and its conclusions.

**Certified Milk**—proceedings of the twenty-first annual conference of the American Medical Milk Commissions, Inc.

How the dairymen and the medical men have co-operated in their efforts to secure pure milk for the consumer and what they have accomplished is shown in the various addresses and reports found in this volume. Some very interesting facts and instructive data in connection with the production of pure milk are given.

**Principles and Practice of Obstetrics.** By Joseph B. DeLee, A.M., M.D., Professor of Obstetrics, Northwestern University Medical School. Fifth Edition, Thoroughly Revised. Large octavo of 1140 pages, with 1128 illustrations, 201 in colors. Philadelphia and London: W. B. Saunders Company, 1928. Cloth \$12.00 net.



In this edition the author has rewritten a number of subjects and carefully revised all of them. He has continued his policy of stressing the more practical points at the expense of the ultra scientific. He also reiterates his respect for conservatism and says: "There is too much interference with the natural processes of labor by men who do not know how, and particularly in hospitals not fully staffed and equipped. The high obstetric mortality and morbidity of the small towns was proved by Woodruff and the mortality of childbirth in the United States in spite of very general hospitalization of the lying-in woman has not decreased. I think it keeps up because of hospitalization."

The Mechanics of the Digestive Tract, an introduction to gastro-enterology, by Walter C. Alvarez, M.D. Associate professor of Medicine, University of Minnesota. Second edition. Published by Paul B. Hoeber, Inc., New York.

The basis upon which the first edition of this work was prepared was the discovery that there are differences in irritability in different parts of the bowel and that the rate of rhythmic contraction of the muscle is graded downward from the pylorus to the ileocecal sphincter. During the five years since elapsed, the author has added new data and feels that in this study of the mechanics of the digestive tract he has something of practical value in the diagnosis and treatment of digestic disorders to offer the profession.

✱ ✱ ✱

The local church was making a drive for funds, and two colored sisters were tearing down hard on Uncle Rastus.

"I can't give nothin'," exclaimed the old Negro. "I owe nearly everybody in this here old town already."

"But," said one of the collectors, "don't you think you owe the Lord something, too?"

"Idoes, sister, indeed," said the old man, "but He ain't pushing me like my other creditors is."—Hugoton Hermes.

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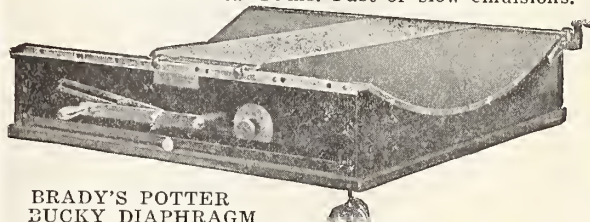
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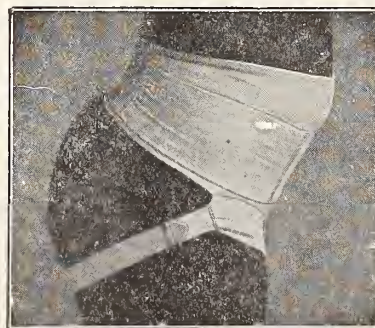
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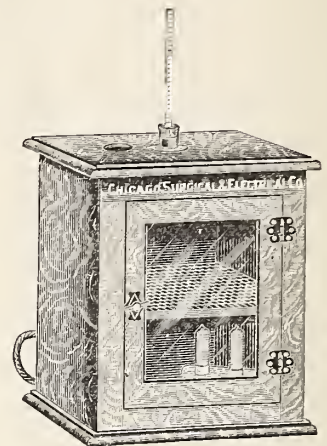
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# THE JOURNAL

of the

## Kansas Medical Society

VOL. XXIX ?

TOPEKA, KANSAS, JULY 1928

NO. 7

### State Medical Societies—Trypanosomiasis—Report of Case

JOHN A. DILLON, M.D., President,  
Larned

Assuming the office of President of our State Society places the individual under a number of responsibilities, not the least being the preparation of an essay known as the President's address.

This might offer little concern to the man who is specializing along some line, doing some original research, or who is in a position to give something of scientific interest; but to the country doctor far from the medical centers it offers a serious problem. And to one whose dabbling in literature has been of the light, frothy type, as has mine, it requires an unnatural effort to produce anything of sufficient seriousness or profundity to do justice to this occasion and to this audience.

Just why custom has decreed that there should be a President's address is beyond my ken. Many a President would get by successfully—in fact no one would ever suspect him of being president—if this custom did not exist.

There are many subjects that are perfectly safe ones around which to build an essay. Statistics is one which never offends, and one can safely give the figures concerning the prevalence of pinworms in Patagonia or Alabama, and arouse no one's ire. Biographies of great men offer sudorific possibilities that are often taken advantage of. In fact, Pasteur, Lister, and others of our immortals, have been worked overtime as material for President's addresses.

So it is needless to say I have been much concerned as to the selection of a subject for my address. I was tempted to write on something of a scientific nature directly related to medicine, with exhaustive bibliography and laboratory verification. I had even selected my sub-

ject and patient, and was waiting only for the autopsy in order to make the case report complete. Unfortunately, while I was absent from town a friendly druggist gave my patient a round of calomel and salts, and cured him. Somewhat discouraged, I decided upon a subject that could not be influenced by meddling enthusiasts. Besides, we always have a surfeit of scientific papers on the program anyway. It is usually a welcome relief for the individual who arrives promptly at the opening of the meeting, to know that he will not be compelled to listen to a heavy disquisition on some obtuse subject. In fact, during the President's address is the time that one usually takes advantage of to make up sleep that was lost the night before. Poorly ventilated sleeping cars and poor judgment in drawing to bob-tails are not conducive to a good night's rest. Besides, the happy custom of publishing our papers in the official journal makes them available for later reading anyway—if anyone cares to read them.

After nearly twenty-two years of fairly close contact with the State Society, I decided that it had a chronic ailment; one that should be called to the attention of the profession, and an effort made to secure suggestions along the lines of diagnosis, prognosis and treatment. Symptoms and syndromes were submitted to a number of our members with a request for helpful hints and opinions.

The diagnosis was easy, and the unanimous verdict was "trypanosomiasis"; chronic, moderate in severity, productive of partial disability, not fatal, rather resistant to treatment—sleeping sickness. Sleeping sickness caused not by the tsetse fly, but by the bug of indifference or laziness.

of the individuals composing it, we may of the individual composing it, we may best seek the solution by a study of the individual.

Personally, I have never seen a case of trypanosomiasis in a human being. Nor have I ever seen a tsetse fly; and, unless I go to Africa, it is very improbable that I shall ever see one. But I read in my books that the symptoms of sleeping sickness are "listlessness and dullness, periods of drowsiness, emotional outbursts, finally coma; at first patient may be aroused, especially at meal-time," etc., etc.

This description seemed to fit in so well with the other lethargic manifestations of our Society, I decided that the term selected as the subject of my address was not inappropriate.

But I would not wish the impression to be gained that our State Medical Society is any worse than others. The point I do wish to emphasize is that with our numbers and our resources we are not functioning as effectually as we should.

Suppose some of the cults had an equal number of intelligent men? What a propaganda along their line would be instituted! Fortified as they are with abdominal contents, they would make the welkin ring with praises lauding their wares. But we sit vacuously year after year, and see these Punch-and-Judy performers go through their, to us, silly antics, and make little effort to refute their preposterous claims.

Modesty and self-effacement are laudable when the display of same does not fit into the program of charlatanry and quackery. We have been too modest, or too ethical, or too something, may be too cowardly, to assert our rights, and whimper that we are a much-abused class. And, incidentally, we seem to feel that the laity should take up the cudgels that we are afraid to use ourselves.

We are making very little concerted effort to conduct an educational campaign before the people. And never was the time so propitious. With every town filled with civic, educational and business clubs clamoring for speakers, and especially speakers versed in medical lines, we are passing up our golden opportunities.

Instead, we attempt to legislate something into the lives of the laity that to them appears selfish and autocratic. Naturally, if not actually, opposed to this

legislation, they are, to say the least, luke-warm toward its success. And the patriotic few who carry on so ineffectively, or so effectively, which ever your viewpoint, at our state capitol, have to work in a soil totally unprepared. Is it any wonder that noxious weeds sometimes grow in our legislative halls?

We will have a chance in the near future to test out our legislative power, when the Basic Science bill comes up for consideration. There is no question but that it is a popular measure, and one that should go through easily if a little concerted consistent action be taken by the profession. It is the duty of each and every member of our Society to familiarize himself with this proposed legislation, and explain it in detail to his representative. I personally know that this is a popular measure, for the reason that it has been presented to about a dozen audiences within the past six months, and not a dissenting voice has been heard against it. In fact, where straw-votes have been taken, every hand has been raised in favor of it. I am not fearful of the success of the Basic Science Act, if we will all just do a little bit of work in its behalf.

The only way to get proper and satisfactory health laws is to put the individual candidate on record in his home county. In nearly every town or county there is some man or body of men or women who can by a little effort put their representative right, and he in turn would vote right. It is the steady persistent work the year around that brings results. Not the hysterical outburst every two years that stirs up the hornets' nest and accomplishes nothing.

Probably not much can be accomplished through the Society itself, except to spur more of our members into individual action. If this could be accomplished, there would be no limit to our success in putting through the things of worth to the profession. This would be true at least in the small towns, where personal contact is more intimate—and I almost said where personal friendship is more valued.

We are apt to complain and become profanely excited when we discuss some



of the problems which menace the profession.

But what are we doing as individuals to change these conditions? What are you doing, Doctor, in your village or in your town or city?

In ninety per cent of cases—nothing.

We of the medical profession are proud of the record of our predecessors, and we think everyone else should be proud. We think the people should feel as we do—should know medical history as well as we who have studied it a lifetime. We therefore receive a severe jolt when we see a good friend taking treatments from some “adjuster” or rubber. Yet we never become wildly excited when our banker friend tells us he was down at Hot Springs taking the baths and rubs. On the contrary, we tell him we hope he feels better. And even mentally vow, when he assured us he does feel better, that sometime we will take some baths and rubs ourselves.

We must not lose sight of the personal touch as a curative agent. Thirty-seven different kinds of religious healers have this in mind, and secure results. A half-dozen varieties of manipulators gouge, twist and soothe the bodies and minds of the credulous, with this as their chief asset. Even members of our own craft turn electric switches that loose “rays” of purest bunk serene, which owe their efficacy in a great many cases to the personal touch—and the word “touch” is used advisedly. We pour noxious mixtures into bottles, and tell the applicant for health it is a good tonic—and if we can believe what the manufacturers say, it is a good tonic—and we transmit this assurance to the patient, and he gets better. He also gets better when Mrs. Eddy says “God is good—there is no disease.” Or when the manipulator says “Your backbone is askew; I will fix it.” Or when hosts of others do or say equally silly or illogical things. So why should doctors not tell and advertise truths, instead of allowing the misguided and the fakirs to educate the people?

This is one outstanding symptom of sleeping sickness that could be easily relieved.

But enough of this for the present. Let us take up something else.

In conducting our annual meetings we have not changed our methods to any degree in many years. In the selection of a meeting place we have narrowed down the available places to three or four. And we often have to wait some time before an invitation is extended from one of these. Never are there rival cities clamoring for the meeting. Why? Simply because the burden is too great for any small society. Or for any large society, for that matter. Too much and too costly entertainment.

Why should any society furnish a free banquet to the members of the State Society? It is no hardship on any individual member to pay the cost of a plate for himself and wife, and no one would stay away on this account. But it is a hardship on a county society to raise seven or eight hundred dollars for this purpose, and too often discord is created before all convention obligations are liquidated.

On this phase I took the liberty to write an active member of the executive committee of a medical society in a city which entertained our State Society in comparatively recent years. I quote his letter:

“Dear Doctor:

“Your letter of inquiry at hand. In regard to entertaining State Medical meetings. I have this to say. It is an evil day that should be put off as long as possible. To try to entertain a bunch of “Docs” and their better halves is not what it used to be in pre-Volstead days when there was no other meeting place than Kansas City, Kansas.

“To gather together enough bologna, cheese and rye bread, with an afterwash of barley water, is quite a droll task, to say nothing of baking numerous wafers and mixing a concoction of pink tea for the ladies.

“All in all, I think we got along very well with the Medical Society. I think it was a good thing for our local Society. They seemed to take a brace—although not marked. The total expense was taken care of by an assessment on the members of the local Society, and the balance by commercial exhibitors.

“The big bug-a-boo of the whole thing seemed to be the banquet. I think that

it is the opinion of most of the fellows here that this feature should be a 'Dutch treat'—each member indicating his intentions toward this affair at the time he registers, by digging up the necessary coin of the realm, for which he should receive a ticket.

"This would give the committee in charge the information that would remove it from a guessing contest.

"Having just recently entertained the bunch, we feel free to propose such a step, and feel that it will meet with the approval of most members who happen to live in the convention cities.

"This change itself would make it possible for smaller cities to entertain the Society."

Obviously his name must remain incog.

There is food for thought in this. Let's come down out of the clouds, and handle the affairs of our Society in a business way.

Another thing—can our programs be made more attractive?

At the annual meeting of the Secretaries of the State Medical Societies held in Chicago in November a great many problems were presented. Many different suggestions were made for the improvement of our annual meetings. Criticism was made that golf was being overstressed and robbing the meetings of deserved attendance. Our own Society has wisely frowned upon this feature, and our golf is a pre-convention function, and incidentally I may say very popular.

Another suggestion, and it has sufficient merit to be given consideration, is that we co-operate with the neighboring states in regard to dates of meeting, and secure a corps of well-trained and competent men who would go from one state meeting to another, on regular schedule; thus giving us a maximum of instruction for a minimum of expense. This undoubtedly would appeal to the practitioners of the smaller towns, as in many instances this would offer an excellent chance for post-graduate work.

Those who are not familiar with the selection of outside men for our annual meetings, should know that an attempt is made to get good men within fairly close radius, in order to cut down the cost to

our Society. And it has been our experience that we get just as satisfactory essayists. Occasionally an exception is made to this rule, when some outstanding man is secured, regardless of where his home may be.

Still another matter that furnishes food for thought, and one that is to be decided at this meeting, is the matter of our dues.

So far our dues have taken care of our expenditures, but the time has arrived when we are breaking into our little surplus, and unless we wish to recede in our work it is necessary that our dues be increased. But not to the extent that it will be a burden to anyone.

Compared with other states, in this respect ours ranks with the lowest, if indeed it is not the lowest.

Cost of everything has doubled and trebled in many instances during the past fifteen years, and the only alternative that presents is to raise our dues sufficiently to meet our requirements. Kansas cannot afford to take a back seat among her sister states. Least of all in affairs so important as conserving the health of her people.

Pennsylvania is contemplating the assumption of all expenses of the annual meeting by the State Society. In that state there are seven cities of sufficient size to entertain the State Society, but even there it is felt the burden is too great for any one Society. The House of Delegates has authorized the Board of Trustees to raise the annual per capita assessment one dollar or more to take care of the cost of entertainment. This is an innovation that we in Kansas might seriously consider. Personally, it appears to me as a wise move.

In Texas the House of Delegates is an independent body, and starts its meeting the day before the regular program. The advantages of this are obvious. It gives more time for the consideration of work of the Society, acquaints more members with the working plans, and enlists co-operation and interest of many individuals who otherwise would be lukewarm in their participation. Maybe we should consider adopting a similar plan here in Kansas.



In answer to a questionnaire sent to a number of practitioners in whose judgment I have confidence, several answers were received, one of which I will quote, as it seems fairly representative. This is from a man who has taken considerable interest in his County Society—which by the way is one of our best County Societies—but who has somehow lost interest in the State organization.

“Conditions have changed very rapidly during the last few years. County Societies, I think, as a rule are less active than they used to be. There is a growing tendency to import one or more men as attractions for the county and district meetings that we have.

“Perhaps this is as it should be. The American Medical Association, the Clinical Congress of Surgeons, and the Interstate Post-Graduate Association, each are conducted upon an elaborate scale. At any one of these three meetings one may hear great celebrities in medicine and surgery; almost every man who appears holds a chair of some sort in one of our best medical schools. In addition to this, in these meetings we always have eminent men from abroad.

“A very large per cent of our men attend one or more of these meetings. When they do, the County Medical Society and the State Association each suffers in comparison with the larger and greater societies. I believe that this is the reason that the County and State Medical Societies are attracting less attention in the profession than they did in former years.

“I do not know what the remedy is. The State and County Medical Societies each have their places in medical circles, and each should preserve places in keeping with the modern trend of medical affairs. The County and State Medical Societies should each place upon its program men who are doing special work, and for that reason are better qualified to talk upon certain subjects. The State Medical Society possibly could have a two-days session with greater benefit and better attendance than a three-days session would have. The world is moving faster now, and many men do not like to spend three days in listening to other men who are possibly no better

qualified to speak than they themselves.”

“Oh wad some power the giftie gie us,  
To see oursels as ithers see us!”

This quotation, much overworked, has come down to us from that canny Scot, Robert Burns. It is still trite as ever. Sometimes it does us doctors good to get an unbiased frank expression from the laymen, especially if it be from one in whose ability and judgment we have confidence.

To such an individual, a man of mature years, a successful business man, above the average in intelligence, I propounded the query: “What is the matter, if anything, with the medical profession?”

He came back stronger than I had anticipated, but for a layman showed a grasp of the situation most remarkable.

This is his reply, verbatim; and given as it was in a friendly spirit, his castigation should be followed closely:

“You ask me what, if anything, is the matter with the medical profession?

“If you mean what do we patients think of you doctors individually, we would naturally very much prefer not to say. Or at least not until after we are able to pay you what we owe you.

“But since, like Hashimuro, you ask to know—on guard!

“Judging you collectively—as a profession—the average business man is ready and willing to concede without debate that intellectually you doctors rank far above the average of any other profession or calling.

“Yet in some respects—in fact, in many if not most of the practical things of life, and in business matters especially—the average business man feels that you medics are veritable babes in the woods.

“One thing we can not understand nor respect, is your fanatical adherence to an out-of-date code of professional ethics. In the opinion of most modern up-to-date business men your profession seems—with all respect to you individually, doctor—to be suffering from ethical dry-rot.

“Hedged about, governed, if not hagridden, by an ante-bellum and antediluvian code of professional ethics which

bar you from using such essentials of modern business as advertising, double-entry accounting, systematic collection of accounts, interest-bearing notes for past-due obligations, chattel mortgages to secure doubtful promises to pay, and other similar absolute essentials to other lines of business, you remind us of a decayed old Southern gentleman wrapped in his threadbare Prince Albert and impenetrable dignity, haughtily satisfied with his own worth, and disdainful of anything and everything dated A. D.

"Ethics, in the sense that it seems to us you medical men too often mishandle the term, might be defined for your profession as a cloak of indifference, intolerance or ignorance, behind which, or with which, you conceal your class timidity to buck the line of modern business on an equal footing with other callings. It is of a class and kind with your continued use of a dead language for prescription writing solely, it seems to us, so that you can get a professional fee for a dose of Arm-and-Hammer brand by dressing it up in Latin as sodium bicarb. You seem to think that it is still necessary to shroud your works in mystery and mummary, as in the Dark Ages; whereas all us modern patients ask is that you know what to give and when to give it. A dose of castor oil is just as effective and none the sweeter whether slipped to us in Latin, Volapuk or Yid.

"In the opinion of many of us, an instance of the far-reaching evil effects of this professional dry-rot—this oversensitive consideration of ethical standards—which we think the medical profession to be suffering from, is the present statute in Kansas and other states which permits the osteopaths, chiropractors, and other classes of self-styled "healers", to practice at all, and especially on an equality with your profession.

"For—side-step or sugar-coat it as you may—the responsibility for this most harmful and humiliating of all fool laws of the state, lies directly and solely at the door of you doctors and surgeons and your state associations.

"You M. D.s spend four to six years in medical schools, and generally as

many more in interne and post-graduate work, before you dare stick up your shingles in some dinky little cross-roads. There you drudge along in debt and despair for eight or ten years more, and have to accumulate gray hairs and at least one wife and a sample kiddie or two, before the community matrons consider you eligible to a confinement call. And you are well on towards the inevitable tremor before anything but minor or emergency surgery is entrusted to you. By the time you have topped the hill, and are gliding down the slope towards senility, if you have been lucky you have accumulated a nice little home and a nice little car not too heavily mortgaged. Then, and not until then, generally, are you entitled to some standing as a doctor or surgeon and to a voice as well as membership in your state associations.

"Your state associations are composed of men just like you, and in their membership probably embrace more hard study, more brains, more ability, and more years of earnest and honest service to suffering humanity, than any other similar organization of any other calling on earth.

"Yet such organizations of super-able men, for no apparent reason but ethical handicap, will sit supinely and idly by, as did your own state association here in Kansas a few years ago, and let a small bunch of Missouri mule-skinners and out-of-the-state Slick Sims lobby a bill through your state legislature which let loose a horde of youthful ignoramuses of the rubbing and thumping cult to overrun your state and set up in "practice"—Lord save the mark!—on a legal equality with you men who had spent many of the better years of your lives qualifying and perfecting yourselves as doctors and surgeons.

"All these invading youngsters needed—or need now, for that matter—if we of the laity are to believe what we hear from you medical men—was the price of a mail-order "diploma," a few weeks of practice popping vertebra, and guts enough to put up a shingle and proclaim the new cure-all. And the law which you men let them jockey through the legislatures of Kansas and other



states, placed these kids, scarcely dry behind the ears either in years or practice, on an equal footing with you to dose and slash and suture us innocents of the great common herd of patients.

"And once admitted to the state they seemed to know that they could depend on your ethical reserve not to bawl them out and enlighten the public. They have traded on and profited by your silence—have capitalized your ethical complex—until now it would seem that they are so thoroughly entranced that you can not, even if you could arouse from your ethical lethargy and dare try to, expose the reign of the quacks and the charlatans who have Kansas and other unfortunate states in their power apparently beyond redemption.

"In the face of this legislative robbery of the cradle and matriculation of morons into medics, what price all of your expensive schooling, your years of study, and added years of experience? It is to weep as well as to laugh!

"What it has cost your profession for sitting supinely by on your ethical bottoms and letting this legislative outrage be perplexed, is shown by the swarm of rubbers and punchers and backbone-poppers which has since over-run the state proclaiming their readiness and self-attested ability to cure suffering humanity of any and all ills flesh may be heir to.

"You may say all this is no business of the laity.

"But we patients are coming to feel more and more that you men of the medical profession should prevent as well as cure. And many of us feel that it is your professional—yea, your ethical—duty to protect us in our ignorance from the horde of shysters who are ever ready and greedy to impose on our ignorance and credulity, and graft on our aches and pains.

"If you men—if your state association—did not feel righteous enough in your collective wisdom to rise in your intellectual, professional and associated strength, and lift voice against the passage of this iniquitous statute, then can you blame us of the uninformed majority for believing these charlatans whom you admitted to the state to practice on an

equality with you, when they proclaim to us that they can cure our ills without your painful knife or nauseous dosages?

"If the graveyard sextons in Kansas are overworked these late years, and if the land is full of cripples and chronics who might have been made well if cared for in time by competent practitioners, there are many of us non-professional men and women who believe that you men are to blame, and not the invading army of matriculated farm-hands and freshmen you turned loose on us armed solely with rubbing tables and sheepskins.

"And not the least ridiculous though pathetic thing about it, is that you let these slickers get their law by on the plea that it was merely "treatments" that they asked legal permission to give.

"Their watch-word and war-cry and rallying slogan was to do away with the surgical knife and medication—to cure solely by "adjustments," manipulation of nerve-centers, and other fancy-sounding but practically meaningless clack and clap-trap. "Impinged" nerve fibres were to be unshackled, and the ailing world set free.

"Knowing in your professional wisdom that this was a lot of meaningless hoakum and bunk, you nevertheless sat back in ethical dignity and composure, fatuitously smiling in your sleeves the while, and let their lobbyists hoodwink the legislature into turning loose on us this swarm of patters and pilferers.

"Had you had the business acumen of a plumbers union, you would have seen the menace to your profession, and the danger to the credulous public, and with your associated ability and influence could have and would have out-lobbied this legislative raid, and saved yourselves the loss and humiliation that has followed, as well as faithfully discharging a duty you owed to the public by giving it the protection then easily within your power.

"The humiliation of your profession is made complete, it seems to some of us, by the developments that have ensued in osteopathy and chiropractic since these cults made the legal hurdles in Kansas.

"Admitted to the state as knifeless, bloodless and medicineless cure-alls, based apparently on the same incompetent, irrelevant and immaterial foundation as other alleged occult isms and faith-cures, the ink was hardly dry on the legislative bill when every rubber and thumper who could get in invaded the state. And at once set up in opposition to you men on a campaign of widespread and persistent propaganda against your age-old learning and practices. Yet since then practically every one of them has laid in supplies of all nostrums known to materia medica. And most of them have had the conventional hardware store and butchershop equipment of a regular doctor's office installed. And now they are all set to dose and slice in the good old way practiced by all legitimate doctors and surgeons since the fabled days of Aesculapius. "Treatments" indeed!

"It is for reasons something like these that you regular practitioners stand convicted, in the minds of many outside the profession, of responsibility for a law which the whole intelligent majority of the state must ever blush for, and the credulous ever suffer for.

"You failed, when you saw the storm approaching and the menace menacing, to rise in your intellectual might, doff your ethical frills and furbelows, roll up the sleeves of your individual knowledge and common-sense and collective wisdom, and fight a modern practical catch-as-catch-can battle for your own welfare and rights, and for the public weal. As would any other organization or association of any of the far-less intelligent professions or callings of the present day, should they see their own welfare in danger and the public menaced.

"You doctors may have other things the matter with you, individually and professionally. But, as said before, to many of us your outstanding if not your only complaint seems to be periodic attacks of ethical dry-rot. And in our opinion it will be a long day before either you doctors or the patient and ignorant public will cease to suffer from what your ultra-ethical conservatism allowed to be perpetrated on the statute books of Kansas in 19 ."

Of course we knew all of this, but we didn't realize that the laity were so well informed. There are many bald facts and truths set forth in the letter just quoted that should at least stimulate us to take stock of ourselves. To be accused as accessory to the crime of launching these pseudo healers upon the people, is at least a serious indictment. Whether or no we plead guilty, matters little in the eyes of the people. From their point of view we are guilty. And guilty by inaction. Which is even more humiliating than an accusation of intentional neglect.

Our business methods are criticized as being slovenly. Is it not natural to deduce that our professional methods may be judged the same?

Maybe the arraignment so forcibly, and I will say ably, presented by this lay member is true. Maybe we are all that he calls us. And possibly we can do nothing to change it. But if we are slumbering at the switch, or suffering from "sleeping sickness," maybe we can at least make a resolve to attempt to make an effort to seriously consider the possibilities of modifying the condition to a slight extent.

And maybe we may in time be cured entirely.

—————R—————

#### **Foreign Body in Rectum—Report of a Case**

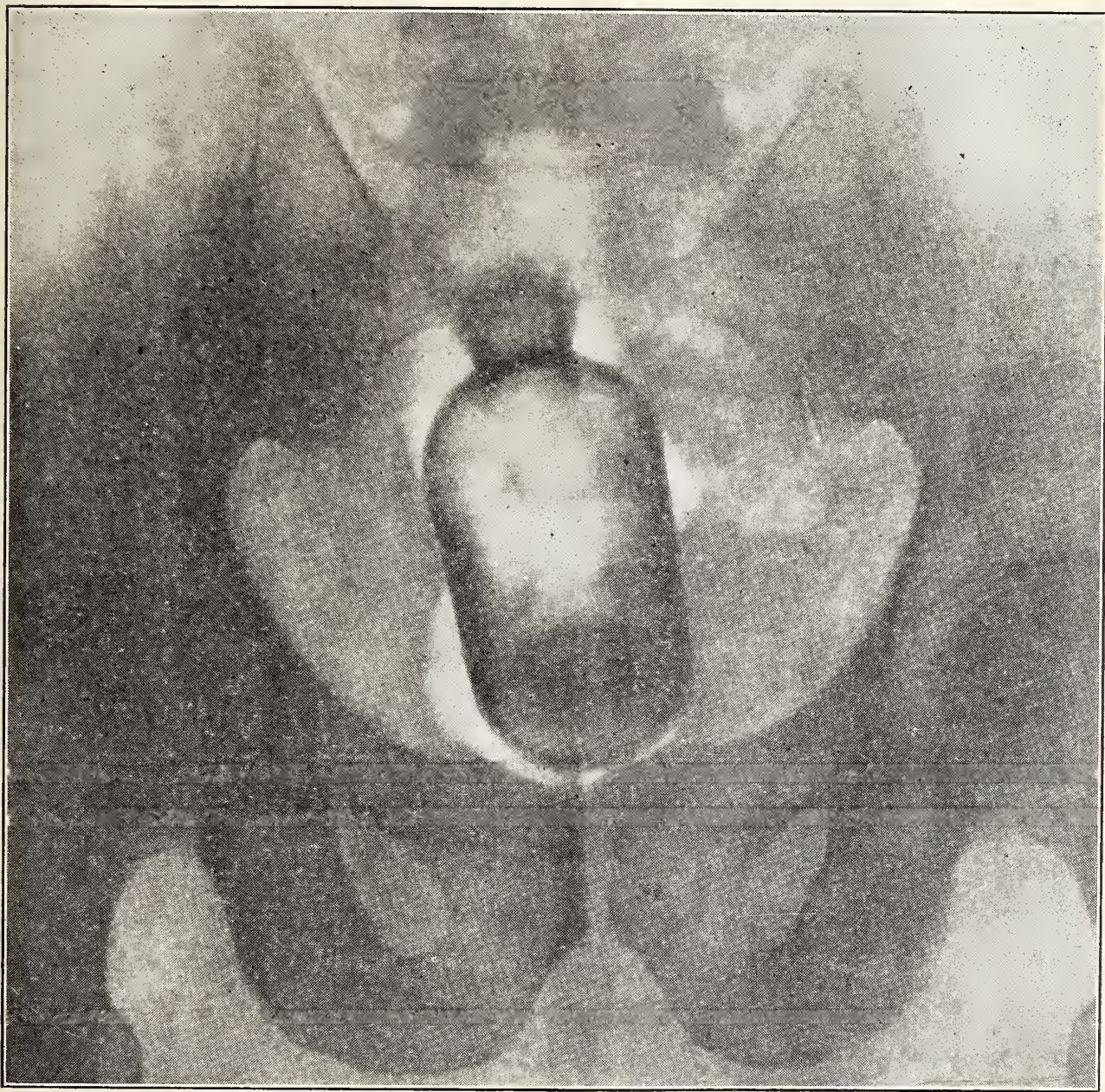
RALPH G. BALL, M.D., Kansas City, Kan.

On March 8, 1928, in the Out-patient Surgical Clinic, of the University of Kansas, we were confronted with an interesting case of a foreign body in the rectum. The patient, J. T., a well developed white man, 50 years of age, came in stating that at 6:00 a. m. the previous morning while reducing his hemorrhoids with a vaselined 2 ounce Listerine bottle (Fig. 1) it escaped his grasp and passed into the rectum. At this time there was no discomfort. Rectal examination revealed at the tip of the index finger a mass apparently the bottom of the bottle. With one hand on the abdomen the upper end could be palpated pointing anteriorly. The patient was advised to enter the Hospital, which he did that afternoon. Under ether anesthesia,



the spincter was manually dilated and an unsuccessful attempt made to grasp the object with the fingers while making manual pressure above the pubes. Placental forceps, sponge forceps, small obstetrical forceps and Tarnier's cephalotribe were used to no avail and the pa-

tient similar to the one retained by the patient. A wire loop was fitted about the shoulder of the bottle with long projecting handles as pictured (Fig. 2). A section of heavy glass tubing such as is used in boiler gauges was obtained to slide up over the wire handle to hold the loop



tient was sent back to his room. Three courses to follow were considered; to devise an instrument suitable for the occasion and remove the bottle through the dilated spincter, to divide the spincter, or to open the abdomen and attempt to push it down and out from above.

An ordinary wire coat hanger was secured together with a Listerine bottle

closed. The following morning the patient was again taken to the operating room and placed under ether anesthesia. The wire instrument was gently inserted and carried upward along the side of the bottle until the loop was felt to slip over the neck. One finger was placed in the rectum on the bottom of the bottle to serve as a guide and traction applied to



the wire. After some maneuvering the object presented at the anal orifice and was delivered with cork in place and a small quantity of Listerine intact. Examination of the rectal mucosa showed no abrasions and also no hemorrhoids. The patient left the operating room in good condition and the following day felt so well that he refused to remain longer in the Hospital.

Many cases of foreign bodies in the rectum have been reported and many ingenious methods for their removal described. The majority of cases, however,

present the attending physician with new and frequently difficult problems concerning the most satisfactory method of removal. At Drueck<sup>1</sup> has remarked "the conformations of the rectum peculiarly liable to the arrest and retention of foreign bodies."

Foreign bodies have been introduced through the anal orifice to relieve some pathological condition, for the purpose of concealment, to gratify the sexually perverted and as pranks of the grotesquely humorous. The dangers encountered in these cases include tearing or scratching the mucous membrane with subsequent infection and ulceration, fistula formation, prolapse, and puncture of the bowel with resulting peritonitis. The treatment, of course, consists in removal of the ob-

ject. The manner in which this is to be effected varies with the position and structure of the object.

The extraction of glass objects presents the particular danger of breaking into jagged fragments and the further difficulty of grasping these fragments because of their smooth surface. In one instance a glass mustard jar<sup>2</sup> was successfully removed by means of small obstetrical forceps. Sharon<sup>3</sup> reports the manual extraction of a pickle jar from an atonic rectum by dilatation of the spineter under ether anesthesia. A glass test tube was delivered by the insertion of a horse hair probang into the tubes'

lumen by Linthisum<sup>4</sup>, while Landsman<sup>5</sup> devised the ingenious method of carrying small squares of adhesive plaster into the rectum and molding them over the sharp edges of a broken glass and bringing down the object with placental forceps, thus avoiding injury to the mucous membrane. Removal of a large glass tumbler in the rectum through the natural orifice was found impossible by Smiley<sup>6</sup> and it was necessary to open the abdomen and remove it through the bowel wall.

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#### TUBERCULOSIS ABSTRACTS

General systemic rest is the foundation of the treatment of tuberculosis. Tuberculous lungs, like other diseased organs, heal best when at rest. Bed rest not only conserves the energy supply of the entire body but also lessens the activity of the lungs. Postural rest and the chest splint are valuable in that they reduce the work of the lung most affected. It has long been known that spontaneous pneumothorax often has a beneficent effect in tuberculosis, due to the enforced rest of the lung brought about by the pneumatic pressure. Pleural effusion, a common complication of pulmonary tuberculosis, also tends to compress or "splint" the lung, while pleural adhesions often serve to limit the motion of the diseased part. With these natural methods of inducing rest of the affected lung as a cue, surgical methods to secure partial or complete immobilization of the lung have been devised. Surgical procedures imitate the natural methods but are more precise and aim to avoid the disadvantages of spontaneous pneumothorax, pleuritic effusion and adhesions. Lung surgery and particularly artificial pneumothorax is proving its great value as an adjunct in the treatment of pulmonary tuberculosis.

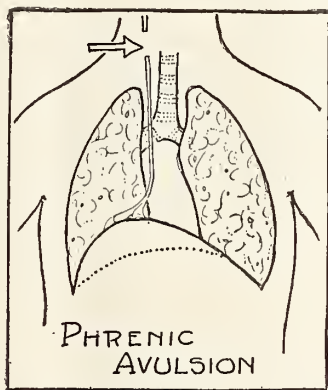




### Surgical Rest in Pulmonary Tuberculosis

To be of value, surgery must be invoked before the patient's reserve is depleted. Surgery is not a substitute for, but a supplement to, the older methods of treatment. The several surgical procedures now employed are all based on the principle of compressing the diseased lung, thus limiting its motion, which reduces the absorption of toxic products, controls hemorrhage and favors repair.

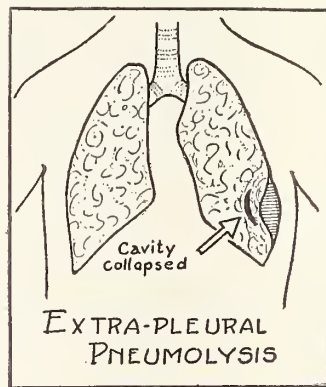
Phrenic Avulsion, or the extraction of at least four inches of the phrenic nerve through an incision at the base of the neck, may lead to striking improvement



but rarely effects a cure. Phrenic avulsion secures localized rest by paralyzing the corresponding half of the diaphragm. This eliminates the piston-like action of the diaphragm and lessens its excursions. Unless held down by adhesions, the diaphragm domes upward and thus materially reduces the capacity of the corresponding half of the thorax. Coughing is made easier and more productive; the amount of sputum diminishes and the lesions improve. Because of the stasis of blood and lymph within the lung and the lessened action, gas, air and fluids are less readily absorbed; hence, when phrenic avulsion is combined with artificial pneumothorax, the necessity for re-fills is less frequent.

Intrapleural Pneumolysis is the cutting by the electrocautery of thin, firm, isolated adhesions within the pleural space. It is indicated in exceptional cases with certain types of adhesions which interfere with complete or satisfactory collapse of the lung by artificial pneumothorax. The risks involved seldom warrant the operation in the present state of its technique.

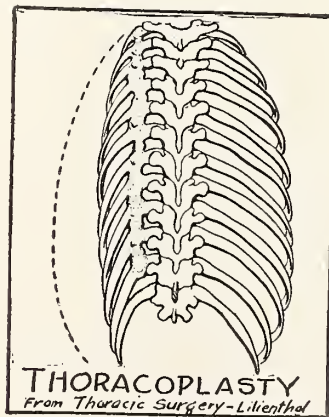
Extra-Pleural Pneumolysis is the localized direct compression of a diseased area or cavity by bluntly separating the two layers of the pleura through a small opening in the thoracic wall and filling the space with fat, muscle, gauze or plastic wax. While it is theoretically a good procedure, the operation is un-



certain and incomplete and has the danger of infection, ulceration, rupture of the cavity and hemorrhage.

Limited Thoracoplasty was devised originally for the obliteration of empyema cavities by resecting lateral segments of the ribs. The outward spring of the rib-ends, however, is unopposed when the rib is resected in the area of greatest convexity and the stumps serve as attachments for the auxiliary muscles, forming rigid buttresses which interfere rather than favor collapse of the thorax.

Total Thoracoplasty is the compression of the entire lung by resecting all, or nearly all, the ribs on one side as



close to the spinal column as possible. The operation is indicated (a) when artificial pneumothorax is unsatisfactory because of adhesions; (b) when the lung fails to expand after pneumothorax

treatment; (c) when lesions in the re-expanding lung become active and pneumothorax cannot be re-induced; (d) when large cavities with rigid walls or pleuritic adhesions make the ultimate prognosis doubtful; (e) when recurrent hemoptysis is not relieved by other means; (f) when, for mechanical reasons, further progress is impossible; (g), when there are complications or conditions which justify desperate measures or which are not suited for less radical treatment.

The single stage total thoracoplasty is the ideal operation since the collapse is immediate, uniform and extensive, but the risk and post-operative dangers are so great that it is seldom justified. Two or more stages at short intervals of two or three weeks are much safer, especially when the resistance of the patient is low. The lower ribs are removed as a first stage to obviate the danger of aspiration infection and pneumonia in the lower lobe or in the other lung. An upper first stage may be safely performed when the lower lobe is controlled by partial artificial pneumothorax until post-operative compression and healing in the upper, more diseased area are advanced or complete, after which the lower lobe may be permitted to re-expand slowly. The number of ribs and the lengths or segments to be removed must be governed by the condition of the pleura, the size and extent of the empyema, the presence, size, rigidity and location of the intra-pulmonary cavities and the flexibility or rigidity of the thoracic walls. The shortening of the ribs causes them to become more parallel with the spine and thus diminishes the thoracic capacity. In time, the gaps left by the resection become bridged over by new bone which adds to the immobilization.

The effects of surgical procedures on the capacity of the lung are:

Massive pneumothorax gives massive compression.

Phrenic avulsion decreases capacity of thorax 1-6 (400 cc.) to 1-3 (800 cc.).

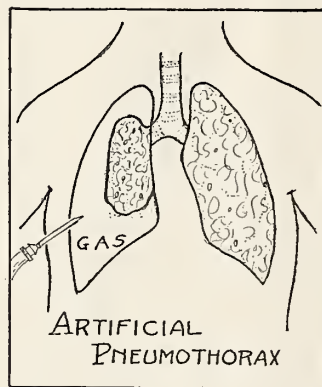
Complete paravertebral resection decreases capacity of thorax 1-4 (600 cc.) to 3-8 (900 cc.).

Phrenic avulsion plus complete paravertebral resection decreases capacity of thorax 5-8 (1500 cc.).

Phrenic avulsion plus complete paravertebral resection plus parasternal resection decreases capacity of thorax 3-4 (1800 cc.).

Results are proportionate to the resistance of the individual to the disease, as expressed in degree of pulmonary fibrosis, and to the degree and maintenance of collapse.—*Surgical Rest in Pulmonary Tuberculosis, Casper F. Hegner, American Review of Tuberculosis, March 1928, XVII, 282-92.*

Artificial Pneumothorax is the compression and consequent immobilization of the lung by introducing under pressure an inert gas into the pleural cavity. J. Carson advocated the use of artificial pneumothorax in 1821. Houghton, in 1832, reported a case of advanced consumption which recovered after a spon-



taneous pneumothorax. Forlanini in 1894 and 1895, reported a series of cases which had been treated with artificial pneumothorax. This procedure has gradually gained in favor, until today it is regarded as a most important adjunct in the treatment of tuberculosis. Artificial pneumothorax will be discussed in August "Tuberculosis Abstracts."

R

A friend met a cheerful Irishman who had plainly suffered some hard knocks.

"Well, Pat, how are you getting along now?" he inquired.

"Oh, Oi'm still hard up, but Oi've a fine job in Honolulu, and fare paid. Oi sail tomorrow."

"Sure, man, you'll never be able to work there. The temperature is a hundred in the shade."

Pat had endured cheerfully too much to be discouraged.

"Well," he replied, hopefully, "Oi'll not be workin' in th' shade all th' time."



# THE JOURNAL

of the

## Kansas Medical Society

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W. E. McVEY, M. D. - - Editor

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### OUR CAMPAIGN

One of our leading politicians recently made the statement that the doctors in this state could elect or defeat any candidate for office or could secure any reasonable legislation—if they would agree upon what they desired and work in unanimity to secure it. Others have expressed the same opinion. In fact, in the only instance in which the doctors in Kansas did work together for a definite purpose a very popular candidate was defeated. In the matter of securing legislation, however, there has never been any concerted effort upon the part of the medical profession since 1901 when the present medical practice act was enacted.

If the medical profession in this state is successful in getting the Basic Science Act enacted by the next legislature it will be the result of their influence with the people more than of their influence with the legislators themselves. The people seem to be in favor of this proposed law, at least a large majority of those to whom it has been presented have so expressed themselves. The legislature would not

dare, even if it were so inclined, to ignore the wishes of the majority of the voters in the consideration of legislation affecting the public health and welfare.

There are fifteen hundred members of the Society scattered over the State. Each one of these has a few hundred patrons and friends in the community in which he lives. His patrons, at least, may be regarded as friend's to scientific medicine and will be in favor of the Basic Science Act if its purpose is explained to them.

This campaign is not a one man business, it cannot be carried to a successful issue by the efforts of any one man or group of men. If the law fails to be passed it will be because a good many members of the Society have done nothing to promote it. If it succeeds it will not be because of the efforts of a few men with the people or the legislature but because everyone has helped.

There is a very important part of the work in this campaign to be done by each member of the Society, and that is to explain the purposes of the Basic Science Act to each of his patrons and secure his or her support for it. Those who are unwilling, too indolent or too indifferent to do that much should never again raise any objection to inroads upon their practice made by quacks and cultists. If there is a member of the Society who is not familiar with the provisions of the Basic Science Act we suggest that he write immediately to the Bureau of Public Relations, K. M. S., 210 Central Bldg., Topeka, Kansas, and copies of the bill and other literature on the subject will be promptly mailed to him. We also suggest that any member of the Society who is in close touch with a candidate for the legislature should not fail to use whatever influence he may have to secure his support for this bill. He should not wait for

some one else to do what he can do himself.

The best time to do these things is *now*.

Twenty-five thousand pieces of matter concerning the proposed basic science law have been mailed to as many different people in the State, and before the legislature meets at least twice as many will have been mailed, but it is impossible to reach all of the voters in this way and it is by no means so effective as the influence of those with whom they are in personal contact.

Everything is being done by the Bureau that its limited appropriation will permit, but with ten times as much money to spend it could not accomplish as much as the individual members of the Society can with the voters in their own communities.

The Reference Committee to whom was referred the reports of the Board of Trustees and Secretary at the annual meeting of the American Medical Association, included in its report the following in regard to hospital staff meetings, which was adopted by the House of Delegates.

"The committee deprecates especially the compulsory multiple scientific meetings of hospital staff organizations. These have tended to limit to small groups the dissemination of medical information and the discussion of medical problems, interfering thereby with the work of organized medical societies. Organization is necessary in order to obtain unified action of the medical profession in various communities. We feel that the need is greater than ever for general discussion of medical problems and for the dissemination of information associated with the specialties to all physicians. Only in this way can the general practitioner keep abreast of modern medicine.

"Your reference committee suggests

that the staff meetings of hospitals be devoted preferably to executive discussions of problems relating to hospital economics and records, and that members of the American Medical Association make special efforts to stimulate interests in and the development of scientific medicine in the regularly organized county medical societies."

A national committee on the Grading of Nursing Schools whose headquarters are in New York has recently sent out a report in which it is claimed that there is an over production of trained nurses. There are 2,286 nursing schools which graduate 20,000 nurses each year. The number of schools and graduates is rapidly increasing.

It is stated that in 1900 there was one nurse for every ten doctors, in 1928 there are fifteen nurses for every ten doctors. In 1900 there were sixteen graduate nurses for every 100,000 people, now there are 166. It is stated that there are more applicants for admission to the training schools than ever before, in spite of the increased requirements. A note of warning is sounded by the committee concerning the necessity for controlling the too rapid growth of the nursing profession.

—————R—————

### CHIPS

The theory that in simple obstruction of the upper part of the intestine death is caused by absorption of toxins from the obstructed bowel is not found to be correct by some recent experiments on dogs conducted by Wangenstein and Chunn and reported in the Archives of Surgery, June, 1928. According to their findings the cause of death is due to rapid dehydration and loss of chlorides which accompany occlusion of this portion of the bowel. They conclude that the virtue of saline solution in the treatment of patients with obstruction in the upper part of the intestine does not lie in any protective or detoxifying influ-



ence, but in its value in replacing the chlorides and fluids lost.

Dandy has reported the successful treatment of a number of cases of Meniere's disease by intracranial section of the affected eighth nerve, *Archives of Surgery*, June, 1928. This operation was done on nine patients and none of these has had a subsequent attack. He says that the operation should be attended by no mortality and no after effects since the patients are practically deaf in the affected ear before operation. He finds reason to believe that a primary lesion of the acoustic nerve is a more probable primary source of the attacks than disease of the semicircular canals.

The probability that a considerable number of cases of so-called "essential hematuria" are in reality cases of purpura of the kidney is emphasized by Kidd in the *London Lancet*, May 5. He thinks that purpura of the kidney or bladder is not an uncommon cause of hematuria. In hematuria of the bladder petechiae may be seen by cystoscopic examination and these cases are painful. In cases of purpura of the kidney there is no pain and the condition may not be diagnosed, but there is likely to be other evidence of purpura if sought for in the skin, joints, retinae, and the hemopoietic system. He says that if the blood shows a marked diminution of platelets, prolonged bleeding time, normal clotting time, or the presence of a characteristic non-retractile fibrin in the clot then the diagnosis of thrombocytopenia purpura can be confidently made.

It is claimed that the number of cases of thrombosis and embolism of the lung increased 100 per cent during the last two years. Fahr believes the most probable cause is the increased use of intravenous medication. While this is probably not the only causal factor, but added to already existing favorable conditions it is the provoking agent.

Angina pectoris has but one cause and that is anoxemia of the myocardium. That is the conclusion of Keefer and Resnik in an article in *Archives of Internal Medicine*, June, 1928. They confine themselves, however, to that form

of angina pectoris which corresponds to the original description of Heberden, later classified as "true" angina. They lay particular stress on two points in Heberden's description; (a) paroxysmal pain, usually pectoral, provoked by an increase of the demands on the heart and relieved by a diminishing of the work of the heart, and (b) the likelihood of termination by sudden death. Of course, anoxemia may be due to many of the conditions now recognized as causative factors.

A report of a study of four hundred and twenty cases of primary hypertension by Bell and Clawson appeared in the June number of *Archives of Pathology*. While they advance no theory as to the etiology of hypertension they express the opinion that it does not appear to be due to vascular disease, but it puts an additional strain on the arterial system which accelerates and intensifies arterial degeneration. In this way may be explained its close association with arteriosclerosis, coronary sclerosis and sclerosis of the small arteries of the brain. And it is probable that when a severe arteriosclerosis of the kidney has developed, the circulatory obstruction tends to raise the blood pressure.

The possible connection between allergy and epilepsy is supported in a report by Spangler of his study of one hundred adult epileptics. In this series there was a history of digestive disturbance with convulsions during infancy in thirty-two of the patients and of these twenty-four were bottle fed and eight breast fed. In fifty-four of the series other allergic conditions occurred; migraine in nineteen, hives in eighteen, eczema in eleven, asthma in three and hayfever in three. Spangler believes that the value of the ketogenic diet is due more to the accidental elimination of the agent to which the epileptic patient is sensitized than to the production of ketone bodies in the system.

—————R—————

"Mother, is it true that an apple a day keeps the doctor away?"

"Yes, Jimmie. Why?"

"Cause if it is, I kept about ten doctors away this morning—but I' afraid one'll have to come soon."—*Bolton Evening News*.

**Proceedings of the Sixty-Second Annual Meeting of the Kansas Medical Society, Held at Wichita, Kan., May 8, 9 and 10, 1928**

**Meeting of the House of Delegates**

The House of Delegates met in the Spanish Ballroom, Mezzanine Floor, Hotel Lassen at 7:45 p. m. On motion the minutes of the last meeting were not read, having previously been published in the Journal.

**SECRETARY'S FINANCIAL REPORT  
May 1, 1928**

|                                                             |            |               |
|-------------------------------------------------------------|------------|---------------|
| Balance on hand May 1, 1927:                                |            |               |
| Medical Defense.....                                        | \$5770.39  |               |
| General Fund.....                                           | 9069.58    |               |
| Total .....                                                 |            | \$14839.97    |
| Cash received from all sources for year ending May 1, 1928: |            |               |
| Dues from members.....                                      | 7850.00    |               |
| Received from Editor.....                                   | 589.60     |               |
| Interest reported by Dr. Gray on bonds and C. D's.....      | 312.61     |               |
| Total .....                                                 |            | 8752.21       |
|                                                             |            | \$23592.18    |
| Expended:                                                   |            |               |
| Medical Defense.....                                        | 2020.41    |               |
| General Fund.....                                           | 6989.40    |               |
| Total .....                                                 |            | 9009.81       |
| Balance .....                                               |            | \$14582.37    |
| Standing of Funds:                                          |            |               |
| Medical Defense.....                                        | \$ 6889.98 |               |
| General Fund.....                                           | 7692.39    |               |
| On hand May 1, 1928.....                                    | \$14582.37 |               |
| Note:                                                       | \$14839.97 |               |
|                                                             | 14582.37   |               |
|                                                             | \$ 257.60  | Decrease 1928 |

We are pleased to report a paid up membership of 1429 since January 1, an increase of fifty-four over that of last year which on May 1, 1928 was 1375, but by the end of last year was 1493. There was a loss of thirty-three members as compared to the previous year, 1926, when the membership mounted to 1526. Our Constitution and By-Laws specifically state that dues shall be paid by February 1 of each year and the big majority do get theirs in by that time. Others remit before the annual meeting and the remaining ones come in intermittently through the rest of the year. At this time there are one hundred and ten delinquents whose dues were paid in 1927 and we have no reason to think they will not be paid later unless they have moved away or passed away. We trust they will remit shortly. This would increase the membership over any previous year since the existence of the Kansas Medical Society.

The first part of March we sent out about three hundred and fifty notices to

the delinquents as has already been shown by the present membership and we trust that we will be able to report a record membership for 1928 when the next annual report is made. We intend sending notices again to the remaining delinquents as soon as we can get to it.

There is a decrease of \$1440.73 in the general fund of 1928 above that of 1927. A question of the cause of this decrease may arise in your mind but you must remember that the Bureau of Public Relations is a new departure and has been maintained from the general fund. Dr. McVey, Executive Secretary, of the Bureau will later make a report of the activities and expenditures of his office giving you the amount spent in maintaining that department.

It is gratifying to report an increase of \$1119.59 in the Medical Defense Fund. Dr. O. P. Davis, Chairman of the Medical Defense Board will later make a report of the activities and expenditures of his office giving you the amount spent in maintaining that department. It is owing to the co-operation of the secretaries, members and officers of the Kansas Medical Society that we have been able to gather together this valuable material for our program. During the years of my service as your secretary, I have never known the responses to my requests for papers to come in so generously and timely, as a matter of fact when our program went to press there had been three more papers contributed than we had time or space for. We are truly regretful that this was the case. I am sure you will find the subjects, one and all, both interesting and instructive. We are truly appreciative for the help of the members and all who have made this possible and extend our grateful thanks to them.

To our president, Dr. Dillon, I want to express my thanks for his assistance and co-operation in these months since he has been our president. He has given generously.

To our guests who have honored us with their presence and given us of their talent, I wish to tender my thanks and that of the assembly at large. My earnest hope is that you will enjoy the program and derive much benefit therefrom.

Respectfully submitted:  
J. F. HASSIG, Secretary.



## TREASURER'S REPORT MAY 1, 1928

To the House of Delegates of the Kansas Medical Society, as treasurer of this society I desire to make the following report for the year ending May 1, 1928.

|                                                                                              |             |
|----------------------------------------------------------------------------------------------|-------------|
| Balance on hand May 1, 1927....                                                              | \$ 6,839.97 |
| Total amount turned over to me as treasurer by the secretary for the year ending May 1, 1928 | \$8,439.60  |
| Interest from bonds and securities for the year ending May 1, 1928                           | 312.61      |
| Total cash received from all sources for the year ending May 1, 1928.....                    | \$15,592.18 |
| Total vouchers paid during the year ending May 1, 1928.....                                  | 9,009.81    |
| Balance May 1, 1928.....                                                                     | \$ 6,582.37 |
| Bonds and securities on hand May 1, 1928:                                                    |             |
| Government Bonds.....                                                                        | \$6,000.00  |
| C.D's. (Riverview State Bank).....                                                           | 2,000.00    |
|                                                                                              | 8,000.00    |
| Total assets May 1, 1928                                                                     | \$14,582.37 |

|     |                                                            |           |
|-----|------------------------------------------------------------|-----------|
| 168 | Dec. 6, 1927, W. E. McVey (Bur. of Pub. Relations).....    | 200.00    |
| 169 | Jan. 4, 1928, W. E. McVey (Bur. of Pub. Relations).....    | 200.00    |
| 170 | Jan. 18, 1928, J. F. Hassig (Sten. Sal. Stamps, Mis.)..... | 748.55    |
| 171 | Jan. 18, 1928, A. M. A. (Membership Cards).....            | 13.50     |
| 172 | Jan. 23, 1928, John A. Dillon.....                         | 37.40     |
| 173 | Jan. 23, 1928, Earle G. Brown.....                         | 11.47     |
| 174 | Jan. 23, 1928, O. P. Davis.....                            | 5.00      |
| 175 | Jan. 23, 1928, P. S. Mitchell.....                         | 45.42     |
| 176 | Jan. 23, 1928, J. T. Axtell.....                           | 25.86     |
| 177 | Jan. 23, 1928, E. S. Edgerton.....                         | 28.32     |
| 178 | Jan. 23, 1928, C. C. Stillman.....                         | 8.00      |
| 179 | Jan. 23, 1928, Alfred O'Donnell.....                       | 10.00     |
| 180 | Jan. 23, 1928, C. S. Kenney.....                           | 36.22     |
| 181 | Jan. 23, 1928, I. B. Parker.....                           | 20.00     |
| 182 | Jan. 23, 1928, C. H. Ewing.....                            | 32.70     |
| 183 | Jan. 23, 1928, W. F. Fee.....                              | 46.50     |
| 184 | Feb. 1, 1928, W. E. McVey (Bur. Pub. Re.).....             | 200.00    |
| 185 | Mar. 6, 1928, W. E. McVey (Bur. Pub. Re.).....             | 200.00    |
| 186 | Mar. 14, 1928, W. W. Bowman.....                           | 7.50      |
| 187 | Mar. 27, 1928, W. E. McVey (Bur. Pub. Re.).....            | 200.00    |
| 188 | Apr. 2, St. Louis Button Co.....                           | 19.25     |
| 189 | Apr. 24, 1928, Evans Press.....                            | 97.50     |
|     |                                                            | \$6989.40 |

## Councilor's Reports

First District, Dr. C. W. Reynolds, Councilor, made the following report:

Mr. Chairman, Members of the Council and House of Delegates:

I submit the following report of the First District, comprising nine counties, two counties, Pottawatomie and Jefferson do not have their own societies since there are so few physicians in them they have found it to their convenience and benefit to have their membership in adjoining county societies which seems to be very satisfactory.

I have been unable to secure any official reports from either Atchison or Nemaha counties, but from information gotten otherwise, Atchison county maintains an active society with nearly all physicians members, but in Nemaha county there has been a lack of harmony for a good many years, two factions exist, few meetings are held and I believe the work of the society is unsatisfactory, several of their physicians feeling unable to tolerate their home society, hold their membership in Brown county, Doniphan county maintains a society of but a few members and have but few meetings but appreciate their membership in the County and State Societies. Jackson county also maintains a society of but few members and aim to meet monthly and we feel that we are quite worth while. All physicians in Brown county are members of their society and a live society exists. Riley county has a splendid active society with all but two physicians in county membership. Marshall county has a good society, meets each month, just two thirds

## VOUCHERS MEDICAL DEFENSE FUND

| Voucher | Date                                             | Payee | Amount   |
|---------|--------------------------------------------------|-------|----------|
| 88      | May 9, 1927, O. P. Davis (Salary & Expense)      |       | \$ 80.00 |
| 89      | May 25, 1927, J. D. M. Hamilton (Attorney Fee)   |       | 245.15   |
| 90      | June 14, 1927, Bauer Printing Co. (Letter Head)  |       | 5.00     |
| 91      | June 14, 1927, Hall Lithographing Co. (Abstract) |       | 45.00    |
| 92      | July 26, 1927, J. D. M. Hamilton (Attorney Fee)  |       | 173.25   |
| 93      | July 26, 1927, O. P. Davis (Three Months Salary) |       | 75.00    |

## VOUCHERS—MEDICAL DEFENSE FUND

|     |                                                      |         |
|-----|------------------------------------------------------|---------|
| 94  | Aug. 26, 1917, Hall Lithographing Co. (Briefs)       | 27.50   |
| 95  | Sept. 28, 1917, J. D. M. Hamilton (Salary & Expense) | 152.86  |
| 96  | Nov. 14, 1927, A. M. A. (Sub. for J. D. M. Hamilton) | 5.00    |
| 97  | Nov. 14, 1927, O. P. Davis (Aug. Sept. Oct. Salary)  | 75.00   |
| 98  | Nov. 14, 1927, J. D. M. Hamilton (Salary & Expense)  | 195.99  |
| 99  | Dec. 10, 1927, J. D. M. Hamilton (Attorney Fee)      | 174.20  |
| 100 | Jan. 7, 1928, J. D. M. Hamilton (Attorney Fee)       | 216.22  |
| 101 | Feb. 13, 1928, J. D. M. Hamilton (Attorney Fee)      | 225.75  |
| 102 | Feb. 13, O. P. Davis (Salary Nov. Dec. Jan.)         | 75.00   |
| 103 | Mar. 8, J. D. M. Hamilton (Attorney Fee)             | 248.99  |
|     |                                                      | 2020.41 |

## GENERAL FUND

|     |                                                         |         |
|-----|---------------------------------------------------------|---------|
| 148 | May 4, 1927, Rorabaugh-Wiley Secy. Luncheon             | 18.70   |
| 149 | May 5, 1927, Edna Moeser (Reg. Expense)                 | 10.00   |
| 150 | May 5, 1927, Fields Florist                             | 16.00   |
| 151 | May 5, 1927, B'sonte Hotel (Fred Harvey)                | 12.05   |
| 152 | May 11, 1927, W. E. McVey (Bureau Public Relations)     | 280.95  |
| 153 | May 11, 1927, W. E. McVey (Sal. 1926-27)                | 2000.00 |
| 154 | May 11, 1927, J. F. Hassig (Sal. & Expense)             | 977.67  |
| 155 | May 11, 1927, Jabez N. Jackson (Guest)                  | 22.45   |
| 156 | May 12, 1927, E. E. Liggett (Neerology Report)          | 7.25    |
| 157 | May 12, 1927, Alfred Schalek (Guest)                    | 48.80   |
| 158 | May 12, 1927, Arthur Steindler (Guest)                  | 48.00   |
| 159 | May 12, 1927, Dean Lewis (Guest)                        | 137.34  |
| 160 | June 13, 1927, W. E. McVey (Bureau of Public Relations) | 200.00  |
| 161 | June 16, 1927, A. M. A. Directory                       | 11.00   |
| 162 | June 16, E. N. Sulis (Dues Roy Russell Remit.)          | 5.00    |
| 163 | July 15, 1927, W. E. McVey (Bureau of Pub. Relations)   | 200.00  |
| 164 | Aug. 15, 1927, W. E. McVey (Bureau of Pub. Relations)   | 200.00  |
| 165 | Sept. 11, 1927, W. E. McVey (Bur. of Pub. Relations)    | 200.00  |
| 166 | Oct. 18, 1927, W. E. McVey (Bur. of Pub. Relations)     | 200.00  |
| 167 | Nov. 12, 1927, W. E. McVey (Bur. of Pub. Relations)     | 200.00  |

of the physicians of the county are members.

A gentle expression of opposition to the proposed raise in dues to the State Society comes to me but I believe it is due to not fully understanding the increased benefits to the profession. I am in strong favor of the increase to provide additional funds for increased activity.

Second District, Dr. L. B. Spake, Kansas City, Councillor, submitted the following report:

To the House of Delegates:

I beg to submit the report of the Councillor from the second district. Composed of Leavenworth, Wyandotte, Johnson, Douglas, Franklin, Miami, Coffey, Anderson, and Linn counties.

Leavenworth county met the fourth Wednesday of each month. Wyandotte county has 115 active members, two honorary; seventeen meetings last year. Co-operated with Kansas City Clinical Society in two meetings, and with the Inter-State Post-Graduate Assembly. Johnson county reports 14 members. Ten meetings in the past year. They have co-operated with the dentists and druggists of the county. They have also had an important interest in the county health matters. Franklin and Miami counties have submitted no report. Douglas county has regular meetings each month. Coffey county has twelve active members, meeting every other Monday. Anderson county has ten active members, eleven meetings in the past year. Linn county has nine members, two meetings in the past year.

Third District, Dr. P. S. Mitchell, Iola, Councillor, submitted the following report:

To the House of Delegates: I made three visits to the Montgomery County Society at Coffeyville and Independence in reference to Dr. Shelton's contention for a right of membership in the society. This was reported to the mid-winter meeting and referred back to the society. The society seems to have the matter well in hand. No other complaints have reached the Councillor. All are well organized and apparently living under the usual harmony.

Fourth District, Dr. O. P. Davis, Topeka, Councillor, submitted the following report:

To the House of Delegates: This report, except as to details, will be quite similar to that of last year. There are seven counties in the District, viz., Shawnee, Wabaunsee, Geary, Osage, Morris, Lyon and Chase. All these counties, except Geary, are comprised in either the Shawnee county or the Lyon county Societies, according to the convenience of the individual members in the several counties. This has come about by a process of gradual evolution, it having been found more satisfactory thus to have two strong societies than a larger number of weak and inefficient bodies.

The Lyon County Society has a paid up membership of 38, derived as follows: Lyon county, 25; Greenwood county, 5; Chase county, 5; Morris county, 2; Osage county, 1. Of these, 4 are new members from Lyon county, and 1 new member from Greenwood county. This society lost 3 members from Lyon county and 1 from Coffey county, one of these by suspension and three by removal. There were 10 regular and no special meetings during the year. The average attendance was 17. This society shows a gain of 3 members over last year. It is a very flourishing wide-awake society.

The Shawnee County Society has a paid up membership of 136, plus 3 emeritus members. These are derived as follows: Shawnee county, 113; Wabaunsee county, 8; Jefferson county, 8; Osage county, 5; Jackson county, 1; Pottawatomie county, 1. Eight of the above are new members, distributed as follows: Shawnee county, 4; Jefferson county, 1; Wabaunsee county, 3. There were lost during the year, 1 by suspension and 5 by removal. Thus there has been a net gain of one member over last year. There were 10 regular and 3 special meetings held, with an average attendance of 64. This society has never been in a better condition as to strength and interest.

Geary county has no active organization, the profession of that county being allied largely with the neighboring county societies or with the Golden Belt Society.



Fifth District, Dr. J. T. Axtell, Newton, Councillor, submitted the following report:

The County Medical Societies in the Fifth District are all in very good condition and function satisfactorily. I have been able to visit most of them during the past year; some of them more than once. There is a tendency in the Western counties to consolidate, and as the roads are good, distance means little. They make better societies by combining. A very little unpleasantness has occurred in the Reno County Medical Society which I think will all be ironed out satisfactorily at home without the intervention of the council.

Sixth District, Dr. E. S. Edgerton, Wichita, Councillor, submitted the following report:

The district has six organized county societies all of which are functioning in a very satisfactory manner from a standpoint of organization, though it is hard because of the small number of members in some to put on satisfactory scientific programs. It is not practical to attempt to organize societies in the other small counties, two of them at this time having only four doctors in the entire county. It has been pleasing, however, to see members from these counties in attendance at the Sedgwick county meetings from time to time and they all show an active interest in the affairs of the State Society. Sedgwick county has the largest society in the district and at this time has a paid up membership of approximately 150. It has been especially gratifying to note the interest shown by members outside of the district in the clinical meetings conducted by the Sedgwick County Society on the third Tuesday of each month. As councillor I have been able to visit nearly all of the societies at some time during the year and feel that the district is in very good condition from the standpoint of organization.

Seventh District, Dr. C. C. Stillman, Morganville, councillor, submitted the following report:

To the House of Delegates: I offer the following report in regard to the activities, rather the lack of them in the Sev-

enth Councillor District. This district comprises eight counties.

A point, worthy of thought too, may be observed in this particular district. The counties are all, in a general way, about on a par so far as number of practicing physicians are concerned, ability to pay on part of the public, etc. The east end of the district has some advantage in so far as latter point is concerned. Population too, is a little greater in the east portion.

But, there is just *one* good functioning and active County Medical Society in the district. Peculiar thing is that this society has been active for more than twenty-five years. It is the Clay County Society. It has meetings, practically always well attended and they have very interesting programs. Clay county too, is merely an average county in the district. Has seventeen members, two of whom live in an adjoining county, there being no county society in their county. There is a reason, and personally I have but scant sympathy for the fellow or bunch of fellows that feels or feels and complains about the inroads of the various cults and quacks, together with the fact that a lot of his fellows in neighboring cities and clinics are grabbing off a lot of things that he feels should come to him, "trade at home" when he is too indifferent or lazy or narrow to help to organize a local medical society. The most frequent alibi is that some local man is not square or else not worthy of membership. True enough, a lot of us are not *all* that we ought to be. This, though, is a cussed poor alibi for not having a local and active society, and the fellow that uses it so is merely kidding himself and does not know it. Have the society and, if needs be, dominate it, get these fellows in and discuss their shortcomings. One does not always have to do this with personalities or be insulting, but men who are wrong and do wrong are not wont to make a scene by defending unworthy acts on their own part. A little self analysis will oft times bring out the point that fault lies largely in jealousy and intolerance on the part of the complainer.

In Republic county we got very good results by a couple of meetings. Their

society started off very well and I hope that it continues, though I have since heard that they are meeting with trouble that I personally feel is the result of indifference.

Rooks county has no organization. Dr. M. J. Miller of Plainville wrote me that they have tried to organize but generally do not have success. They belong as a unit to the Central Kansas Society.

Dr. S. J. Schwaup of Osborne wrote me that they affiliate in Osborne county with the Solomon Valley Society, composed of four counties out there and have good meetings.

I wrote to men in the several other counties of the district and by their prompt and efficient silence they mutely explained to me *why* their counties do not have societies.

I feel that one reason that some societies at least, fall down, is the very fact that they do not elect a competent secretary. That is the outstanding and important office in a medical society. Almost anyone can be president, (I am president of two societies) but the success of the thing rests on the secretary.

Let the chairman wear the red sash, but the secretary has to do the work. A good report should be made of each meeting to the Journal. He also has the arrangement of the program and should get it out promptly and painstakingly. He should not be a man that it is necessary to always have to be prodding. Rather should he be the prodder himself. When such a one is found in a society, he should be elected and retained in office year after year. Do not let him resign. He should be praised too, for he is indeed worthy of it.

Eighth District, Dr. Alfred O'Donnell, Ellsworth, Councillor, submitted the following report:

President and Council-Kansas Medical Society, Gentlemen: I beg to submit the following report from the Eighth District comprised of the counties: Saline, Ellsworth, Ottawa, Dickinson, Lincoln. Saline County Medical Society—32 members, all eligible physicians are members, meet monthly and are active.

Ellsworth county—is part of Central Kansas Medical Society, 9 doctors, 8 of

whom are members; non-member has been here a short time, moved here from Russell where he was not a member of the Society. Central Kansas Medical Society meets quarterly, is active.

Lincoln County Medical Society—has 8 physicians, 6 are members of Lincoln County Medical Society, one belongs to the Central Kansas Medical Society and one non-eligible. Lincoln county has recently joined with the newly organized Solomon Valley Medical Society and meets quarterly.

Ottawa County Medical Society—8 members, meets monthly, and quarterly with the Solomon Valley Medical Society. All physicians of county are members.

Dickinson County Medical Society—23 members, meets quarterly; all eligible men are members.

Ninth District, Dr. C. S. Kenney, Norton, Councillor, submitted the following report:

President and Members of the Council of the Kansas State Medical Society: Dear Sirs: It is a pleasure to make the following report relative to the medical activities of the Ninth Councillor District which is composed of the following counties—Smith, Phillips, Norton, Decatur, Rawlins, Cheyenne, Sherman and Thomas. There are two active societies in the district—the Smith County and the Decatur-Norton. The Smith County meets on call and the Decatur-Norton meets every 90 days.

Smith county has 12 physicians, all but one of whom are members.

The Decatur-Norton County Society is the older, and was chartered in 1905. It is made up of members from the balance of the counties in the district, with a few members from adjacent counties.

The number of physicians in the counties and the numbers that are members of the society in the various counties are as follows:

|                | Physicians Eligible | Members |
|----------------|---------------------|---------|
| Phillips ..... | 11                  | 8       |
| Norton .....   | 10                  | 10      |
| Decatur .....  | 7                   | 6       |
| Rawlins .....  | 6                   | 5       |
| Cheyenne ..... | 3                   | 3       |
| Sherman .....  | 6                   | 4       |
| Thomas .....   | 5                   | 3       |
| Members from   |                     |         |



|                    |       |
|--------------------|-------|
| adjacent counties  | 8     |
| (1 from Smith) . . | <hr/> |
|                    | 47    |

The officers in both of these societies have been alert and active and they have had a very profitable year indeed. A real effort has been made by your councillor to obtain a hundred per cent membership in all the counties but it has not been possible to do so. At the same time I feel mighty well pleased with the conditions in the district, and think it is a very fine average, 86 per cent.

Tenth District, Dr. I. B. Parker, Hill City, Councillor, submitted the following report:

To the House of Delegates: I beg to submit the following report for the Tenth Councillor District. This district comprises the counties of Sheridan, Graham, Trego, Gove, Logan, Wallace, Ellis and Russell. Eight counties a large district. There is one active society in this district. It is a real live society, just as good as our neighbors on the north. A very large percentage of the eligible physicians of the district are active members of the society. The society meets quarterly at Hays, Russell or Ellsworth. The attendance is splendid and a fraternal spirit permeates the meetings. The local doctors of the respective towns are to be commended for their efforts in providing meeting places, material, clinical material and especially for their entertainment of the visiting doctors and their wives.

The plan is to have one or two outstanding men from outside on the program with clinical material to illustrate their papers, also other interesting clinical material. The local members of the society read papers to fill out the program. Free and full discussion is asked for on all papers and clinics. There is a general good will feeling among the members. There has been no charges brought, no dismissal, suspensions or expulsions for unprofessional conduct.

There has been a little complaint as to discrepancies in fees in various parts of the district especially regarding mileage and O. B. cases. I have no doubt that a conference of the physicians in these localities would iron out these misunder-

standings and promote a proper feeling among the members of the profession as well as increase the respect of the laity. It has been a pleasure to serve as councillor of this District.

Eleventh District, Dr. C. H. Ewing, Larned, Councillor, submitted the following report:

To the House of Delegates: The Eleventh District is composed of ten counties extending from Barton county west to the Colorado line. On account of the sparsely settled population of the western counties there are no county societies in these counties and doctors affiliate with societies of adjoining counties.

We have three societies, Barton County, Pawnee County and the Rush-Ness Society. In these four counties the membership is practically one hundred per cent of available doctors and I think this true also in the counties that have no society.

The Barton County Society is the real active society of the district. They hold regular meetings with splendid programs. At the December meeting Dr. James May of Kansas City, Kansas, gave a very interesting and extended address on eye conditions and Dr. Earle G. Brown, Sect. of State Board of Health on Health Topics and quarantine regulations. Invitations were issued to adjoining counties but the attendance was cut short some by the extreme cold weather. The Pawnee and Rush-Ness societies hold only call meetings. Have some good meetings but not enough of them.

Twelfth District, Dr. W. F. Fee, Meade, Councillor, submitted the following report:

To the House of Delegates: As Councillor of the Twelfth District I want to make the following report: All over this district the profession are all working harmoniously with each other as far as I know. There is very little contention, each man is determined to do his best not only for his patients but for the good of the society. In the matter of raising the dues I haven't talked to any of the men yet who were against it. All seemed to think it the proper thing to do, so our society could function properly.

Of course all will be for the "Basic Science Act" and if we are fortunate enough to get this law passed it will help the medical profession wonderfully.

I have made trips to Meade-Seward Society and it is in a flourishing condition. We have taken in some isolated members who did not have a home elsewhere.

Finney County Medical Society functioning fairly well while Ford County Medical Society pays their dues and meets occasionally. Have asked for their meeting nights so that I could meet with them but have not been informed up to date.

### Report of Medical Defense Board, 1927-1928

Dr. O. P. Davis, Chairman of the Medical Defense Board, submitted the following report to the House of Delegates.

The Medical Defense Board herewith submits the report of its operations during the past year, the seventeenth year of its existence. The report of its Attorney is also submitted, which will show the status of all cases at present in litigation. A condensed statement of the expenditures of the Board for this and preceding years is also appended.

It will be seen that six cases have been filed during the year, of which three have been disposed of. There are ten active cases now pending, in addition to ten or twelve cases that may be considered finished, although they are still, technically, undetermined.

The work of the Defense Board should not be judged by the number of new cases filed during the year. Its main purpose, as set forth from the very beginning, is not so much to successfully defend the individual member, although that is by no means to be neglected, as to inhibit the vicious, and in former years widely prevalent, tendency on the part of sharks and pirates to victimize our profession. Our efforts have been quite successful. The number of suits brought against our members have diminished, year by year, down to what may be considered the near minimum. There will always be damage suits, but it is harder to get a decent lawyer to take such a case than formerly, and it is much harder for such a case to

find needed medical support than of old. However, we shall have to carry on our defensive activities just the same, in order that the old trouble may not break forth again in epidemic form.

Heretofore the expenditures of this Board, as per vouchers passing through its hands, have been listed in this annual report. However, since no money whatever is handled by the Board, either going out or coming in, this seems to be a useless duplication of the Treasurer's report and will be discontinued. The Board of course keeps a record of these expenditures for its own information. The expenditures for the past year have been \$1,949.02, which amount is \$32.01 less than that of last year.

The following table, showing expenditures in past years, will be of interest:

#### DEFENSE BOARD EXPENDITURES—14 YEARS

|           |             |
|-----------|-------------|
| 1915..... | \$ 1,254.95 |
| 1916..... | 1,189.27    |
| 1917..... | 777.45      |
| 1918..... | 809.58      |
| 1919..... | 759.41      |
| 1920..... | 1,245.51    |
| 1921..... | 1,458.35    |
| 1922..... | 1,236.08    |
| 1923..... | 1,310.96    |
| 1924..... | 1,479.76    |
| 1925..... | 1,970.04    |
| 1926..... | 2,008.13    |
| 1927..... | 1,981.03    |
| 1928..... | 1,949.02    |

Total, 14 years.....\$19,429.54

Average, per year... \$1,387.82

The following report of our attorney, Mr. J. D. M. Hamilton, was read by Dr. O. P. Davis to the House of Delegates:

Dr. O. P. Davis, Chairman, Defense Board, Topeka, Kansas,

Dear Sir:

There is enclosed herewith a summary of cases which have been presented to me through your board for consideration. The report covers a period from April 1, 1927, to April 1, 1928. It will be noted in comparing this report with the one submitted by me to you last year that we are carrying one more case than at the time of the former report. Of the cases now carried six have been filed during the current year. Of the cases which were reflected in the report for the period ending April 1, 1927, seven have been disposed of, with results favorable to the defendants. One resulted in a verdict for



the plaintiff. Of the cases which have been filed since that report three have been disposed of, two favorable to the defendants and one resulting in a verdict for the plaintiff.

During the year two cases have been brought on appeal to the Supreme Court of the state. Both appeals were disposed of favorably, one resulting in a reversal of the judgment in the case of Dr. W. J. Stewart vs. Wright which had been set out in the previous report as showing a judgment against the doctor, and the other case being that of Updegraff vs. Dr. G. R. Gage, et al, in which the verdict for the defendants was sustained.

Of the two cases which were lost during the year, one will undoubtedly be appealed to the Supreme Court and the other will be settled by the insurance company carrying the doctor's liability.

Several cases are carried in this report which may for all practical reasons be considered as disposed of but due to the fact that there is a possibility of being reopened through appeal or otherwise, they cannot be legally considered as finished. Of the twenty-three cases reflected in the report, ten should be considered as active cases which will have to be disposed of in due course of time.

The report is respectfully submitted for the consideration of the board.

Yours very sincerely,

J. D. M. HAMILTON.

#### SUMMARY OF CASES—MEDICAL DEFENSE BOARD

April 1, 1927, to April 1, 1928.

1. Smock vs. Dr. L. A. Corwin and Dr. W. G. Bouse, failure to properly reduce and treat fracture of femur, filed 4-25-24. For trial.

2. Barrett vs. Dr. A. Bennie, negligent puncture of bladder during childbirth, filed 2-6-25. Dr. Bennie died during the pendency of the case and it has never been revived or an administrator appointed.

3. LaTourette vs. Dr. G. M. Liston, failure to properly diagnose and reduce a fracture of the astragalus, filed 4-24-25. Tried to jury. Verdict for defendant.

4. Teel vs. Dr. Walter J. Singleton and Dr. W. J. Lewis, negligent reduction of fracture of radius, filed 6-16-25. Pend-

ing on Plaintiff's motion for a new trial.

5. Bangert vs. Dr. R. R. Cave, negligent refusal to treat daughter of plaintiff, filed 7-24-28. Pending on Plaintiff's motion for a new trial.

6. Dr. W. J. Stewart vs. Wright, action for failure to properly treat a fracture of semi-lunar notch. Judgment for defendant upon cross petition for malpractice in Lower Court. Reversed outright upon appeal to Supreme Court of Kansas.

7. Schmidt vs. Dr. F. G. McEwan and Dr. L. D. Johnson, negligent appendectomy, filed 11-16-25. Dismissed without prejudice Oct. 1, 1927. Plaintiff has one year from that date to reinstate.

8. Bennett vs. Dr. G. E. Kassebaum and Dr. J. C. Bunten, negligent reduction of fracture of tibia, filed 11-21-25. At issue. Ready for trial.

9. Strode vs. Dr. W. T. McKay, improper treatment of injured tibia, filed 2-11-26. Case tried resulting in a hung jury.

10. Tuttle vs. Dr. F. P. Wesley, improper reduction of fracture of radius. Ready for trial.

11. Updegraff vs. Dr. G. R. Gage, Dr. C. W. Hall and Dr. W. O. Quiring, negligent use of gas resulting in death of patient, filed 7-15-26. Verdict for defendants. Plaintiff appealed to Supreme Court of Kansas and judgment for defendants affirmed.

12. Thomas vs. Dr. J. A. Bundy, illegal abortion, filed 12-1-26. Tried to jury. Verdict for defendant.

13. Young vs. Dr. R. W. Moore, negligent failure to diagnose dislocation of elbow, filed 10-11-26. Tried and resulted in hung jury.

14. Naugle vs. Dr. G. W. Alleman, failure to take X-ray pictures of a fracture of the radius and to properly reduce fracture, filed 7-24-26. For trial.

15. McMillan vs. Dr. Frank Foncanon, failure to properly diagnose and treat fracture of radius, filed 10-10-26. Defendant's demurrer to plaintiff's evidence sustained. Judgment for defendant.

16. Cooper vs. Dr. J. A. Bundy and Dr. Willard Brown, action for negligently producing burn while using fluoro-

scope, filed 4-9-26. Tried to jury. Verdict for plaintiff for \$2,000.00.

17. Smith vs. Dr. R. C. Harner, failure to properly diagnose and treat Colles fracture, filed 3-31-27. At issue. Ready for trial.

18. Wert vs. Dr. G. H. Rotter, failure to properly treat gunshot wound, patient dying from loss of blood, filed 6-1-27. At issue. Ready for trial.

19. Mickens vs. Dr. H. L. Chambers, assault for performing unauthorized operation, filed 8-23-27. Tried to jury. Verdict for defendant.

20. Smith vs. Dr. J. B. Musick, negligent tonsillectomy resulting in hemorrhage and death of plaintiff's child, filed 9-7-27. Dismissed upon settlement by insurance company.

21. Lacy vs. Dr. H. C. Markham, negligence in performing mastoid, filed 9-16-27. Pending upon preliminary motions.

22. Johnson vs. Dr. Charles Rewerts and Dr. O. W. Miner, failure to remove sponge from operative field, filed 9-19-27. Verdict for plaintiff for \$1,000.00.

23. Mickens vs. W. O. Nelson, assault for performing unauthorized operation, filed 2-6-28. Pending on preliminary motions.

### Reports of Standing Committees

Dr. John A. Dillon, Larned, chairman of the Executive Committee, reported that there had been no meeting of the Executive Committee during the year.

Dr. W. E. McVey, Topeka, Executive Secretary of the Bureau of Public Relations, submitted the following report:

THE BUREAU OF PUBLIC RELATIONS OF THE

#### KANSAS MEDICAL SOCIETY

At the last annual meeting of the Society a report was made of the organization and work of the Bureau of Public Relations during the first eight months of its existence. Its plans were outlined and the extent to which these plans had then been developed was explained. The House of Delegates after hearing that report unanimously adopted the following resolutions:

Whereas, A most valuable work is being done by the Bureau of Public Relations of the Kansas Medical Society, through the furnishing of educational articles to newspapers, distribution of

pamphlets to lay readers, and the furnishing of speakers on medical subjects, and

Whereas, It is important that proper educational materials should be distributed through the channels of the regularly organized profession,

Therefore be it resolved, That this Society most heartily endorses the work of the Bureau of Public Relations and requests the various county medical societies and individual members to aid this important work in all ways possible.

At the time our last report was made we were supplying forty-three newspapers with short articles on medical subjects, one each week. At this time the number of newspapers supplied has been increased to seventy.

The list of lecturers for public meetings stands as at that time. The Bureau has not frequently been called upon for these lecturers, but we note that they have filled a considerable number of dates, the arrangements having been made by the secretaries of county societies. The list was published several times in the Journal and was also sent to each secretary. These public meetings are of great importance in our campaign for better medical legislation as well as in the interest of scientific medicine. Our president, Dr. Dillon, has addressed a number of these meetings and has been able to impress his audience with the desirability of a law such as we propose. It is not possible, however, to reach all of the people through public meetings nor by any other method alone.

It was suggested at the meeting of the House of Delegates in Hutchinson that a state-wide campaign committee be formed for the purpose of determining the attitude of the candidates for the next legislature, and creating as much sentiment in favor of our proposed bill as possible. Acting on this suggestion the members of the Council were requested to suggest the names of members in each of the counties comprising their councilor districts, for membership in this committee. There were several counties in which there were no members of the Society. Except for a few substitutions that were necessarily made the committee of eighty-seven members is practically as recommended by the members of the council.

We wish to thank the members of this committee for co-operation and valuable



assistance. We have tabulated and arranged all of the information received concerning the attitude of the candidates so that it is easily available, and are adding to our files other information as it is received. We have supplied the members of this committee with copies of the proposed Basic Science Act; copies of a pamphlet analyzing its provisions, prepared by the Executive Secretary of the Bureau of Legal Medicine and Legislation of the A. M. A.; reprints of a report by the Council on Medical Education of the A. M. A. on Chiropractic Schools, and other documents to be used for the information of candidates.

Shortly after the last annual meeting a paper was sent to us which was written by a layman, in answer to some propaganda in the form of advertisements and hand bills distributed by chiropractors in opposition to vaccination against smallpox and immunization against diphtheria. Inasmuch as similar campaigns were being conducted in other sections of the state, it seemed to us that this paper should be given more publicity. It was therefore reproduced in pamphlet form and ten thousand copies were distributed through the county societies.

Since then, except for the weekly newspaper articles, the work in our office has been mostly concerned with our legislation campaign. Dr. Carmichael informed us that the medical students in the University would gladly assist in this campaign and suggested that a letter from the students should have considerable influence with the voters. A letter was prepared, signed by the students, and ten thousand multigraphed copies of the letter with the names signed, were mailed to as many voters in the state. The original signed letter is kept on file in our office in case its authenticity may at any time be questioned.

We had already realized that the literature we wished to send out could not be satisfactorily distributed through the county societies, but in order to secure a more general and wider circulation we must have a mailing list. We asked the members of our campaign committee to supply us with lists of the voters in their counties. We wish to thank these men

for their prompt and hearty co-operation. In a very short time we had lists of voters covering a large part of the State. By selecting from these lists we were able to distribute the ten thousand students' letters very widely. At the same time an article, stating that an appeal for fair treatment had been made by the medical students at the University and giving the substance of the letter, was prepared for the newspapers. Copies of this were sent to the members of the committee with the request that they try to get it published in their local newspapers. We received a good many copies of the papers containing the article and feel satisfied that the students' letter received considerable publicity.

We have just completed mailing ten thousand copies of a pamphlet entitled "Plain Facts About the Laws Governing the Practice of the Healing Art in Kansas," in which an effort is made to analyze the laws now on the statute books and explain wherein they are unfair and discriminating. These were mailed to another group of names taken from the lists sent us by the members of our campaign committee.

That this might be accomplished very careful planning and rigid economy were required. In order to keep such an office in operation there must first be considered the fixed and definite running expenses. When the appropriation is also fixed and limited the amount that can be accomplished depends upon the surplus of the appropriation over and above the fixed expenses. In order that we might send out the largest number of the students' letters at the least expense these were multigraphed in our office, so that the only expense was for stock and postage—\$58.50 for stock and \$200.00 for postage. The ten thousand pamphlets recently distributed cost \$94.00 for printing and envelopes and \$150.00 for postage.

Except for a large amount of routine correspondence naturally devolving upon an office of this character, this is a fairly complete report of the work of the Bureau for the past year. To us it has meant a great deal—to you it will mean little or nothing, according to the results

which cannot at this time be estimated. One who has been willing to give a considerable part of his time during the past twenty months, for the love of God and the Medical Profession, to the development of these plans and the establishment of a place in the economic affairs of this state for such an institution as our Bureau of Public Relations, you will naturally regard as too optimistic for a dependable prophet. However, we could not be in intimate contact with the Bureau for long without realizing that this is the most important advance ever made by the Kansas Medical Society.

Dr. Earle G. Brown, Topeka, Chairman of the Committee on Public Health and Education, made a verbal report which was accepted.

Dr. W. S. Lindsay, Topeka, Chairman of the Committee on Public Policy and Legislation, made the following verbal report which was accepted.

Dr. Lindsay said that the work of the Committee on Public Policy and Legislation and the Bureau of Public Relations greatly overlap. He praised Dr. McVey for his work and stated that he thought it had been very adequate. He also stated that the work of the committee on legislation is just a small thing, and that the Bureau of Public Relations would be the means of carrying the message of the Basic Science Law.

Dr. L. F. Barney, Kansas City, Chairman of the Committee on School of Medicine, submitted the following report which was accepted and filed:  
To the House of Delegates of the Kansas Medical Society:

Your committee of the school of medicine desires to report that the medical school is on a firmer and stronger basis than at any time during its existence. With the excellent building that it already has and the two new ones, a ward building and a nurses home, which are now under course of construction and which will be finished this summer, we feel that there is no danger of its progress again being hampered by starting discussions to remove it to another location.

As to accomplishments of the school, the dean, Doctor Wahl, reports as follows: "This year there were 300 appli-

cants to enter the freshman class and 77 were accepted. Of these every Kansas student who met the minimum requirements, 65 in all, were accepted, 2 incompletes, men whose work had lapped over at the University from previous years, and the other 10 were from Kansas City, Mo. The sophomore class has increased from 42 last year, to 56 this year, the juniors from 33 to 41 and the seniors from 33 to 35 and next year there will be 41. There will be 12 nurses graduated this year against 6 last year. For teaching purposes they have handled approximately 40,000 dispensary patients which is about double the number of two years ago.

The hospital at present has 120 beds and is overcrowded, having turned away 150 patients last month, but this will be relieved when the new building which has a capacity of 100 beds, which is under construction, is equipped. This year the hospital took care of 2,700 patients, with 36,000 patient days, less than 20 per cent of whom are private patients and most of these are used for teaching. In nervous and mental diseases, besides receiving the regular work in the hospitals and clinics in Kansas City, each senior is sent to one of the state institutions at Topeka or Osawatomie where he works for two weeks.

Student Apprenticeships: The plan is being tried this summer of assigning voluntarily a junior during the summer vacation to a reputable physician practicing in the state as an assistant.

Orthopedic Clinic: An orthopedic clinic is maintained at Pittsburg, Hutchinson, Dodge City and one alternating between Hays and Ellsworth. The arrangements are all made by the local medical organizations and only patients are treated who are referred by local physicians or by lay people who are authorized by the local medical organizations, such as Red Cross or school nurses.

Post Graduate Instruction: A course in pediatrics was started last September, in which a full time man makes a circuit of six cities, lecturing to the physicians one day each week in each city. He has now made five circuits and there have been from 14 to 35 men enrolled in each



city. A new course in internal medicine by another man is now being started.

**Immediate Needs of the School:** An appropriation of \$300,000.00 is urgently needed. \$60,000.00 must be had to equip the ward building in course of construction and which will lie vacant until it is equipped; \$30,000.00 to enlarge the power plant to take care of the new buildings; \$10,000.00 to make up a deficiency appropriation caused by fire which destroyed temporary barracks used to house patients; \$200,000.00 for a service building which will provide cold storage space, enlarge the kitchen and dining room, house the pathological department which is now in the old building a mile away and provide wards for the colored patients who are now housed in temporary fire-trap barracks. Radium for the treatment of malignancies and other conditions is also very badly needed.

Your committee recommends that the officers and every member of the Kansas Medical Society make every effort to obtain the passage of the above appropriations at the next meeting of the legislature.

Dr. George Gray, Kansas City, Chairman of the Committee on Hospital Survey, submitted the following report which was accepted and filed:

To the House of Delegates, Kansas Medical Society:

I, as chairman of the Hospital Committee of the Kansas Medical Society, beg to make the following report. Your committee has had no meeting during the past year, however, I have co-operated with the American Medical Association Committee through its council on Medical Education and Hospitals, in making investigation of hospitals in the state for their classification of hospitals in which they give their approval as desirable for interne service. This is their seventh presentation of hospital statistics and gives Kansas 136 registered hospitals with a capacity of 10,453 beds. Of hospitals not admitted to be registered there are 21 with a capacity of 378 beds, which I think is a very creditable showing for the hospitals of the state, for it means that during the past years practically all the hospitals in the state of

Kansas have much improved in the matter of hospital service. This seventh report has just been issued and you can obtain a copy of it from the American Medical Association at a cost of fifty cents.

Dr. W. E. McVey, Topeka, Chairman of the Committee on Medical History, gave the following verbal report which was accepted.

Dr. McVey stated that the work of the Committee on Medical History was to collect photographs and life sketches of the presidents of the Kansas Medical Society. He reported that the photographs of all but three of the presidents, dating back to 1857, had been secured. The life sketches of all but two of the presidents have been secured and pasted in a book which is kept for this purpose.

Dr. J. F. Hassig, Kansas City, Chairman of the Committee on Scientific Work, presented the program of the meeting as the work of the committee for the year.

On motion it was decided that the Necrology Report would be read at the general assembly the following day.

A motion was regularly made and seconded that the secretary be instructed to telegraph our senators and representatives urging them to support the Robinson Amendment which allows doctors to deduct traveling expenses from their income tax when attending medical meetings and to vote against the proposed increase in narcotic tax from one to three dollars.

A motion was regularly made and seconded that the Bureau of Public Relations be discontinued, which was lost on vote.

Resolution increasing the annual dues from \$5.00 to \$10.00 which was introduced in the House of Delegates last year was also lost.

Dr. C. H. Lerrigo of Topeka introduced the following resolution:

Whereas: At a meeting of the Executive Board of the Kansas Tuberculosis and Health Association, October 22, 1927, that Association took action recommending that all of its county societies and other affiliated bodies include the following steps in their program:

(a) Invite the County Medical Society to designate a certain number of its members, say two, to become members ex-officio of its board of directors or executive committees, if there be one.

(b) Lay its annual program of activities before the County Medical Society for information and suggestions.

(c) Appoint a special committee to confer with a similar special committee appointed by the County Medical Society about matters that come up from time to time in which both groups are mutually interested.

(d) Report to the parent body of the voluntary health agency any matters as to which an accord has not been reached with the County Medical Society, in the hope that through conference between the parent body of the health agency and the State Medical Society any such matter may be negotiated and adjusted to the mutual satisfaction of all concerned.

(e) Conduct at least one open meeting each year to which the members of the County Medical Society are specially invited.

Be it Resolved, by the Kansas Medical Society in its sixty-second annual session that the Society approves of the request for co-operation in health work made by the Kansas Tuberculosis and Health Association and instructs our Bureau of Public Relations or other competent authority to recommend to our component County Medical Societies that they adopt the following measures:

(a) Accept the invitation from the voluntary health agency to designate certain of its members to serve as members ex-officio on the board of directors or executive committee of the voluntary health agency.

(b) Study and consider any program of activities that may be referred to it by the voluntary health agency for information and suggestions; and, if such program is approved, make a public statement to that effect, and otherwise support the program so approved.

(c) Appoint a special committee on public relations to confer from time to time with similar committees appointed by the voluntary health agency on matters of mutual interest to both agencies.

(d) Report to the State Medical So-

ciety any matter as to which an accord has not been reached with the voluntary health agency, in the hope that through conference between the State Medical Society and the parent body of the voluntary health agency any such matter may be negotiated and adjusted to the mutual satisfaction of all concerned.

Be it Further Resolved: That our Bureau of Public Relations is authorized to negotiate similar relations with any other voluntary Health Agency which it considers in good standing.

Sedgwick County Medical Society introduced the following food resolution which was adopted:

We the members of the Kansas Medical Society, go on record, decrying the fads which prevail in our land today and especially the food fads which tend to foist on the public high priced patented foods, etc., at the expense of white flour.

This condition has reached such an alarming proportion through insidious advertising and otherwise, that the consumption of white flour products have decreased to an alarming extent.

Bulk for bulk, white flour yields more calories than any other form of carbohydrate food in daily use, and should be looked upon as the best and cheapest source of energy food.

White flour is not a balanced food, neither is whole wheat flour, none of our single articles of food are complete in themselves over a long period of time, but must be supplemented with other foods, such as milk, fruits and vegetables, especially the leafy vegetables.

The bran fad of the present time, is undoubtedly over done and much harm has been caused to those with weak digestive tracts by the eating of large quantities of coarse irritants such as bran.

The leafy vegetables contain considerable amounts of indigestible matter and this tends to elimination, for this purpose they have no equal among our common foodstuffs, because they are smooth and non-irritating to the alimentary tract.

We desire, in the public interest, to place on record that, in our opinion,

1. The case of whole wheat bread has been overstated.



2. The allegation that white bread is responsible for certain grave illnesses is not supported by scientific facts.

3. White bread of a good quality is a wholesome and nutritious food, whole wheat bread of a good quality is also a good article of food for certain people.

4. There is no good reason for thinking that the substitution of whole wheat bread for white bread in the national diet, would make for material improvement in the national health and physique.

Dr. Alfred O'Donnell of Ellsworth introduced the following resolution which was adopted:

Whereas, there is located within the State of Kansas, Broadcasting Station K. F. K. B. located at Milford, Kansas, operated by Dr. J. R. Brinkley who, posing as a surgeon and specialist, gives daily lectures on medical topics—the sole purpose of which is to lure patients to his hospital for his financial benefit. There is nothing in his lectures of educational value to the public but many misleading statements made obviously to frighten prospective patients to consult him for relief of their imaginary or real infirmities.

Whereas, the said Dr. Brinkley is unethical and has no professional standing and is not affiliated with any ethical medical society in the state.

Therefore, be it Resolved, by the Kansas State Medical Society, now in session, that the National Board of Radio be respectfully asked to revoke the license of this station and thus in a measure clear the already overcrowded atmosphere, at the same time conferring a favor on many intelligent listeners and misguided prospective patients.

A motion was made and seconded that hereafter at the banquets of the annual meetings that all members pay for their own banquet tickets, which will greatly lessen the expense of our hosts.

#### **Joint Meeting of the County Secretaries and the Council**

This meeting was held Tuesday, May 8th, in the Grill Annex in the basement of the Lassen Hotel.

A complimentary luncheon was served, the following being present: Dr. H. E. Haskins, Kingman; Dr. E. S. Edgerton, Wichita, Dr. H. L. Clarke, LaCygne;

Dr. W. F. Fee, Meade; Dr. C. D. McKeown, Wichita; Dr. W. J. Eilerts, Wichita; Dr. C. W. Reynolds, Holton; Dr. E. H. Johnson, Peabody; Dr. F. L. De Pew, Howard; Dr. J. H. Enns, Newton; Dr. Warren Bernstorff, Pratt; Dr. I. H. Dillon, Wellington; Dr. John A. Dyer, Ottawa; Mr. J. D. M. Hamilton, Topeka; Dr. John A. Dillon, Larned; Dr. J. F. Hassig, Kansas City; Dr. I. B. Parker, Hill City; Dr. Alfred O'Donnell, Ellsworth; Dr. A. B. McConnell, Burlington; Dr. A. E. Walker, Anthony; Dr. P. S. Mitchell, Iola; Dr. W. E. McVey, Topeka; Dr. J. T. Axtell, Newton; Dr. E. C. Duncan, Fredonia; Dr. J. A. Pinkston, Independence; Dr. C. C. Stillman, Morganville; Dr. O. P. Davis, Topeka, and Dr. Forrest A. Kelley, Winfield.

Short talks were made in the interest of county societies and the medical profession at large by Dr. W. E. McVey, Topeka; Dr. Alfred O'Donnell, Ellsworth; Dr. H. E. Haskins, Kingman; Dr. W. J. Eilerts, Wichita; Dr. O. P. Davis, Topeka; Dr. E. S. Edgerton, Wichita, and Mr. J. D. M. Hamilton, attorney for the Medical Defense Board.

The meeting adjourned at 1:30 p. m. in order to attend the scientific program.

#### **Meeting of the House of Delegates,**

**May 10, 1928, 8:15 p. m.**

This meeting was held in the Grill Annex in the basement of the Lassen Hotel. Following the roll call the first order of business was the election of officers for the ensuing year.

The following officers were elected:

President-elect—Dr. L. F. Barney, Kansas City.

Vice President—Dr. E. C. Duncan, Fredonia.

Treasurer—Dr. Geo. M. Gray, Kansas City.

Delegates to A. M. A. for two years: Dr. John A. Dillon, Larned; Dr. F. A. Carmichael, Osawatimie.

Councillors—3rd District, Dr. P. S. Mitchell, Iola; 6th District, Dr. E. S. Edgerton, Wichita; 10th District, Dr. I. B. Parker, Hill City; 12th District, Dr. W. F. Fee, Meade.

On motion the election of councillor for the 9th District was postponed for another year, Dr. Kenney being unable

to attend the meeting. Dr. W. F. Fee was re-elected as a member of the Medical Defense Board for a period of three years.

#### STANDING OF THE COUNCIL

| District  | Councillor                        | Term Expires |
|-----------|-----------------------------------|--------------|
| 1st.....  | Dr. C. W. Reynolds, Holton.....   | 1930         |
| 2nd.....  | Dr. L. B. Spake, Kansas City..... | 1930         |
| 3rd.....  | Dr. P. S. Mitchell, Iola.....     | 1931         |
| 4th.....  | Dr. O. P. Davis, Topeka.....      | 1929         |
| 5th.....  | Dr. J. T. Axtell, Newton.....     | 1929         |
| 6th.....  | Dr. E. S. Edgerton, Wichita.....  | 1931         |
| 7th.....  | Dr. C. C. Stillman, Morganville.. | 1930         |
| 8th.....  | Dr. Alfred O'Donnell, Ellsworth.  | 1930         |
| 9th.....  | Dr. C. S. Kenney, Norton.....     | 1929         |
| 10th..... | Dr. I. B. Parker, Hill City.....  | 1931         |
| 11th..... | Dr. C. H. Ewing, Larned.....      | 1929         |
| 12th..... | Dr. W. F. Fee, Meade.....         | 1931         |

Dr. F. A. Carmichael of Osawatomie called attention to the correspondence course given by Forrest C. "Phog" Allen, physical director of the University of Kansas, who is an osteopath, and urged that the course be investigated. On motion by Dr. O. L. Garlinghouse of Iola and seconded by Dr. H. F. Hyndman of Wichita, that the chair appoint a committee of three to investigate and meet with the proper authorities relative to the course given by the physical director of the University of Kansas, and their traveling expenses be paid.

The motion carried unanimously and Dr. Dillon appointed the following committee: Dr. Alfred O'Donnell, Ellsworth; Dr. J. W. May, Kansas City; the above committeemen to name the third member.

Dr. E. D. Ebright of Wichita introduced the following resolution:

Whereas, the medical school of the State University was located at Kansas City, Kansas, chiefly for the reason that it was thought to be large enough to furnish the clinical material that is necessary for teaching purposes, and

Whereas, as a matter of fact, it has this material sufficient to justify the action already taken and sufficient to assure the continuous and healthy growth of the institution; and

Whereas, members of the faculty of the institution have gone out over the state organizing at different cities clinics, thus coming into active competition with the physicians at these places and working hardship upon the profession of the state that has stood loyally by the institution in the past; and

Whereas, we believe this course is not only unnecessary, but distinctly harmful in that it is adding to the already serious problem of pauperization of the citizens of this state, who are being taught by act and by implication that the medical profession owes it to every supposed social betterment program to furnish free medical service for every cause that may be launched whatsoever.

Now Therefore be it resolved, by the House of Delegates of the Kansas Medical Society in its sixty-second annual session at Wichita this 10th day of May, 1928, that we do not conceive it the duty of our Medical School to thus function and we advise that its activities be limited to the legitimate purposes for which it was founded.

After reading this resolution Dr. Ebright moved its adoption which was regularly seconded and unanimously carried.

The following motion was made by Dr. R. W. Hissem which was regularly seconded and carried; that the chair appoint a committee of three to investigate the advisability of having a full time combined editor of the Journal and secretary.

The chair appointed the following committee: Dr. F. A. Carmichael, Osawatomie; Dr. George M. Gray, Kansas City; Dr. Alfred O'Donnell, Ellsworth

Dr. E. S. Edgerton introduced the following resolution which was regularly seconded and carried.

"That the reading of the annual reports of the secretary, treasurer, councillors, editor of the Journal, chairmen of the standing committees, chairman of the medical defense fund, be dispensed with and that these reports shall be fully written and handed to the secretary at the meeting of the House of Delegates for the completion of the minutes, and these minutes shall be published in the first number of the Journal following the annual meeting. The various officers and committee men, however, may have the privilege of calling to the attention of the House of Delegates any special features in their reports that they deem important."

The following resolution was presented increasing the annual dues from \$5.00



to \$10.00: "That Section 1, Article 13 of the Constitution be amended by substituting \$10.00 in the place of \$5.00 in the fifth line of said section." This was referred to the 1929 meeting of the House of Delegates for its consideration.

Dr. P. S. Mitchell made the following motion which was regularly seconded and carried:

"Be it resolved that this society appreciative of the splendid entertainment it has received at the hands of its hosts, the Sedgwick County Medical Society, arise in evidence of that appreciation and hereby extend them their unanimous thanks."

Meeting adjourned.

### Meeting of the Council

The new council met and organized in the Grill Annex of the Lassen Hotel on Thursday, May 10th, 1928, at 10:30 a. m. The meeting was called to order by the president.

The following members were present: Dr. John A. Dillon, president; Dr. L. F. Barney, president-elect; Dr. George M. Gray, treasurer; Dr. J. F. Hassig, secretary, and the following councillors: Dr. P. S. Mitchell, Dr. O. P. Davis, Dr. J. T. Axtell, Dr. Alfred O'Donnell and Dr. C. H. Ewing. Dr. O. D. Walker of Salina extended a cordial invitation to hold our next annual meeting in Salina, which was accepted.

The council decided to hold a three-day session and the secretary was instructed to fix the date at a time when it would interfere least with the annual meetings of our neighboring states.

The secretary presented his expense account from January 24, 1928, which included stenographer's salary (\$300.00) miscellaneous; stationery, typewriter supplies, stamps, telegrams and long distance telephone calls (\$100.55) and his salary (\$600.00) for the past year making a total of \$1,000.55 which was allowed. On motion regularly made and seconded the secretary's salary was increased from \$600.00 to \$1,000.00 per year.

Dr. W. E. McVey, editor of the Journal, made the following report:

Financial Statement, The Journal of the Kansas Medical Society, May 1, 1927, to May 1, 1928:

|                                 |            |            |
|---------------------------------|------------|------------|
| Subscriptions—1500 members..... | \$3,000.00 |            |
| Advertising .....               | 4,747.06   |            |
| Sales and Subscriptions .....   | 329.64     |            |
| Other Sources .....             | 53.52      | \$8,130.22 |
| Journal Printing .....          | 2,369.25   |            |
| Stock and Stationery .....      | 760.70     |            |
| Electrotypes .....              | 173.76     |            |
| Salaries and Wages .....        | 2,520.00   |            |
| Office Rent .....               | 100.00     |            |
| Postage .....                   | 192.65     |            |
| Miscellaneous .....             | 39.85      | 6,156.21   |

|                             |            |
|-----------------------------|------------|
| Net Earned .....            | 1,974.01   |
| Bills Due and Payable ..... | 146.00     |
| Total .....                 | \$2,120.01 |

Account of Editor of Journal with The Kansas Medical Society, May 1, 1927, to May 1, 1928:

|                                |            |            |
|--------------------------------|------------|------------|
| Receipts:                      |            |            |
| Advertising .....              | \$4,747.06 |            |
| Sales and Subscriptions .....  | 329.64     |            |
| Kansas Medical Society .....   | 2,000.00   |            |
| Other Sources .....            | 53.52      |            |
| Accounts Due and Payable ..... | 146.00     | \$7,276.22 |

|                            |            |            |
|----------------------------|------------|------------|
| Expenditures:              |            |            |
| Journal Printing .....     | \$2,369.25 |            |
| Stock and Stationery ..... | 760.70     |            |
| Electrotypes .....         | 173.76     |            |
| Salaries and Wages .....   | 2,520.00   |            |
| Office Rent .....          | 100.00     |            |
| Postage .....              | 192.65     |            |
| Miscellaneous .....        | 39.85      | \$6,156.21 |

|                                                |            |
|------------------------------------------------|------------|
| Balance .....                                  | \$1,120.01 |
| Elliott Addressing Machine and Equipment ..... | 190.00     |
| One Steel Filing Cabinet .....                 | 32.50      |
| One Royal Typewriter .....                     | 95.00      |
| Unpaid Accounts .....                          | 146.00     |
|                                                | 463.50     |

Cash on Hand .....\$ 656.51

Accepted and filed.

Dr. W. E. McVey, Executive Secretary of the Bureau of Public Relations, made the following financial statement for the Bureau from May 1, 1927, to May 1, 1928.

|                                      | Received   | Disbursed  |
|--------------------------------------|------------|------------|
| Salaries .....                       |            | \$1,510.00 |
| Printing and Stationery .....        |            | 311.25     |
| Postage .....                        |            | 478.75     |
| Checks received from Treasurer ..... | \$2,200.00 |            |
| Totals .....                         | \$2,200.00 | \$2,300.00 |
| Amount Due .....                     | \$ 100.00  |            |

Dr. McVey's report was accepted and filed.

Dr. E. S. Edgerton made the following motion which was regularly seconded and unanimously carried: "That not to exceed \$1.00 per capita of the membership be allowed to defray the expenses incurred by the local county society in entertaining the annual state meeting."

Meeting adjourned.

### General Session

The scientific session convened at 9:45 a. m. in the Spanish Ballroom of the Hotel Lassen, Wichita, Kansas, May 8, 1928, to listen to the previously announced subjects and the discussions thereof as presented by the guests and members of the Society.

Dr. E. D. Ebright made a welcoming address in behalf of the City of Wichita

and the Sedgwick County Medical Society to the Kansas Medical Society.

#### PROGRAM

Tuesday, May 8th

"State Medical Societies—Trypanosomiasis—Report of Case"—Dr. John A. Dillon, President, Larned.

"The Constitutional Psychopath and the Criminal Law"—Dr. H. C. Curtis, Wichita.

Discussion opened by Dr. Karl A. Menninger, Topeka.

"Birth Control"—Dr. F. W. Tretbar, Stafford.

Discussion opened by Dr. J. D. Clark, Wichita.

"The Restoration of Deformities and Disabilities of the Legs and Feet"—Dr. John Prentiss Lord, Omaha, Nebraska.

"Treatment in Toxemias of Pregnancy"—Dr. Otto H. Schwartz, St. Louis, Missouri.

"State Medicine"—Dr. C. H. Lerrigo, Topeka.

Discussion opened by Dr. Geo. I. Thacher, Waterville.

"Uses and Abuses of Free Medical Service"—Dr. E. A. Reeves, Kansas City.

Discussion opened by Dr. Arch D. Jones, Wichita.

"Building up the County Society"—Dr. W. Gordon Emery, Hiawatha.

Discussion opened by Dr. H. E. Haskins, Kingman.

"Plastic Surgery"—Dr. E. C. Padgett, School of Medicine, Kansas University.

Discussion opened by Dr. L. S. Nelson, Salina.

Wednesday, May 9th

"Fuso-Spirillosis"—Dr. L. P. Warren, Wichita.

Discussion opened by Dr. J. W. Cheney, Wichita.

"Treatment of Acute Middle Ear"—Dr. L. B. Spake, Kansas City.

Discussion opened by Dr. George Litsinger, Topeka.

"The Management of Eye Injuries"—Dr. F. C. Boggs, Topeka.

Discussion opened by Dr. James W. May, Kansas City.

"Conservation of Eyesight"—Dr. John Green, Jr., St. Louis, Mo.

"Epidemic Encephalitis and the Coun-

try Doctor"—Dr. B. A. Higgins, Sylvan Grove.

Discussion opened by Dr. H. N. Moses, Salina.

"Drainage in Abdominal Cases"—Dr. F. D. Kennedy, Norton.

Discussion opened by Dr. J. H. Peck, St. Francis.

"Anesthesia—Local vs. General"—Dr. Daniel Petersen, Herington.

Discussion opened by Dr. E. J. Reichly, Herington.

"The Mechanism in Psychogenic Disease"—Dr. N. R. Smith, Halstead.

Discussion opened by Dr. L. C. Bishop, Wichita.

"Acute Intestinal Obstruction"—Dr. R. S. Haury, Newton.

Discussion opened by Dr. E. E. Morrison, Great Bend.

"Early Diagnosis of Tuberculosis"—Dr. F. A. Trump, Ottawa.

Discussion opened by Dr. H. R. Wahl, Kansas City.

"Report of Kansas State Nephrology Committee"—Dr. E. E. Liggett, Oswego.

Thursday, May 10th

"The Treatment of Empyema"—Dr. L. E. McFarlane, Manhattan.

Discussion opened by Dr. C. H. Briggs, Wichita.

"Treatment of Acute Polio from the Pathological and Physiological Standpoint"—Dr. E. D. Ebright, Wichita.

Discussion opened by Dr. C. E. Ross, Wichita.

"The Use of Digitalis"—Dr. P. T. Bohan, School of Medicine, Kansas University.

Discussion opened by Dr. H. N. Tihen, Wichita.

"The Treatment of Obstructive Jaundice and Its Complications"—Dr. Waltman Walters, Mayo Clinic, Rochester, Minnesota.

"Ocular Headache"—Dr. L. S. Powell, Lawrence.

Discussion opened by Dr. C. S. Trimble, Emporia.

"Appendicitis"—Dr. C. S. Newman, Pittsburg.

Discussion opened by Dr. Alfred O'Donnell, Ellsworth.

"The Sedimentation Test in Surgery"—Dr. J. L. Lattimore, Topeka.



Discussion opened by Dr. F. C. Helwig, Kansas City.

"Congenital Malformations of the Kidney"—Dr. A. Boese, Coffeyville.

Discussion opened by Dr. V. L. Pauley, Halstead.

"Narcotic Drug Addiction"—Dr. Forrest A. Kelley, Winfield.

Discussion opened by Dr. Earle G. Brown, Topeka.

At the close of the General Session the second day, Dr. Walter Graves of Wichita, presented the following resolution which was adopted:

Whereas, the Kansas Medical Society, in session at Wichita, learns with great regret of the serious illness of Dr. A. H. Fabrique, of this city,

Resolved, that we extend to Dr. Fabrique our appreciation of the distinguished honor that he has brought to the medical profession of Kansas and the West, and the vast service that he has rendered to humanity, during his long and fruitful life.

Resolved, that we extend to Dr. Fabrique's family our cordial sympathy.

At the close of the General Session the last day of the meeting, Dr. A. E. Gardner of Wichita, presented the following resolution which was adopted:

Whereas, on May 7, 1928, in the Providence of an all wise and just Creator, death came into the home of one of the members of our honorable profession and removed from our midst Dr. Thomas J. Carter;

Whereas, he had practiced his profession in Wichita and Sedgwick County for eleven years, that he was an active and highly respected member of the Kansas Medical Society, that he was an honorable, ethical and conscientious physician and surgeon, that he was entirely worthy of and enjoyed the confidence of his colleagues, that he was highly respected and loved by his patients, friends and neighbors, that he was generous, unassuming, courteous and pleasing in his attitude toward others;

Therefore, be it resolved by the Kansas Medical Society in session at Wichita, that in the death of Dr. Thomas J. Carter this society has lost a faithful and trusted member, this city and community an honorable physician and citi-

zen, that we greatly deplore his untimely death, and express our sincere sympathy to his widow and family.

Be it further resolved, that a copy of these resolutions be sent to his family, to the daily papers of this city, and to The Journal of the Kansas Medical Society.

Respectfully submitted,

J. F. HASSIG, Secretary.

—R—

## DEATHS

William Wesley Wineinger, Dighton, aged 40, was shot and killed by bandits May 24. He graduated from the University of Kansas School of Medicine in 1924. He was a member of the Society.

Thomas Winston, Lawrence, aged 98, died May 14 of lobar pneumonia. He graduated from Rush Medical College, Chicago, in 1858. He was a Civil war veteran.

Olon Carl Thomas, Spring Hill, aged 54, died suddenly April 17. He graduated from the Kansas City Medical College in 1894. He was a member of the Society.

Charles Dunning, Arkansas City, aged 67, died May 18. He graduated from the Medical Department of Columbia College, New York, in 1887. He was a member of the Society.

Andrew H. Fabrique, Wichita, aged 92, died May 10 of cerebral thrombosis. He graduated from Northwestern University School of Medicine, Chicago, in 1905. He was a member of the Society.

Oliver J. Taylor, Wichita, aged 74, died May 15 in Indianapolis of cerebral hemorrhage. He graduated from Hahneman Medical College and Hospital, Chicago, in 1894.

—R—

## MEDICAL SCHOOL NOTES

Dean H. R. Wahl, Professor of Pathology, gave the Chairman's address before the Section of Pathology and Physiology of the American Medical Association's annual meeting at Minneapolis. The subject of his address was "The Responsibility of the Pathologist."

Dr. C. S. Chen, Singapore, recently visited the Medical School. Dr. Chen is vice president of the British Medical Society

of Malaya and a member of the Council of King Edward VII Medical School, Singapore.

Dr. Hazen Kirkpatrick M '27 has completed his internship in St. Mary's Hospital, Kansas City, Missouri, and is now located in Concordia, Kansas.

Dr. James Montgomery and Dr. Donald Black addressed the Caldwell County, Kansas, Medical Society, May 31.

Dr. Frank Teachenor addressed the Vernon County Medical Society, June 7, at Nevada, Missouri.

The following members of the Medical School Faculty took part in the A. M. A. program, held in Minneapolis, June 11-15.

Dr. H. R. Wahl opened the discussion of the paper of Drs. Stovall and Greeley of Madison, Wisconsin, on "Bronchomycosis," in the Section of Practice of Medicine.

In the Section on Surgery, General and Abdominal, Drs. Thomas G. Orr and Russell L. Haden, presented a paper on "Chemical Factors in the Toxaemia of Intestinal Obstruction," with lantern demonstration.

Dr. O. J. Dixon presented a paper on "The Causes of Death in Mastoiditis," with lantern demonstration, before the Section on Laryngology, Otology and Rhinology.

Dr. Frank C. Neff opened the discussion of the paper by Dr. T. L. Birnberg of St. Paul on "Cardiospasm in the New-born," before the Section on Diseases of Children.

Dr. F. C. Helwig read a paper on "The Growth Producing Effect of Extracts of Tobacco on Mice," before the Section on Pathology and Physiology.

Dr. Clinton K. Smith read a paper on "Urinary Calculi in Children," with lantern demonstration, and Dr. Nels F. Ockerblad read a paper on "Fractional Kidney Functional Tests in Prostatism," before the Section on Urology.

Dr. C. B. Francisco read a paper before the Section on Orthopedic Surgery,

on "Treatment of Fractures of Both Bones of the Forearm in Adults," with lantern demonstration.

Dr. Chas. Grabske has a locum tenens in Independence, Missouri during the summer. Dr. Ralph Ball, has accepted Fellowship in Medicine at the Mayo Clinic. Dr. W. W. Summerville accepted the position as Assistant Resident Pathologist at Lakeside Hospital, Cleveland, Ohio. Dr. R. M. Teater will return to Nicholasville, Ky., where he will do general practice. Dr. C. G. Leitch and Dr. Raymond Gard have accepted positions in the Department of Pathology, University of Kansas. The above mentioned are the present interns at Bell Memorial Hospital, internship of each being complete July 1.

Dr. Thomas G. Orr read a paper before the Central Kansas Medical Society, Ellsworth, Kansas, June 7. He also addressed the County Medical Society, St. Joseph, Missouri, June 18.

—R—

#### **Interstate Post-Graduate Association Will Meet in Atlanta**

The Interstate Post-Graduate Medical Association of North America will meet in Atlanta, Ga., October 12 to 19, inclusive. This association in 1926 met in Cleveland, Ohio, where nearly 5,000 practicing physicians were registered. At the Kansas City meeting last October 5,200 were registered.

The daily meetings are held from 7 a. m. to 1 p. m., from 2 to 5 p. m. and from 8 to 10 p. m.

The only charge imposed on physicians who are in good standing in their county, state and national organization is a registration fee of \$5.00.

—R—

#### **Prophylactic Pollen Extracts**

The specific antigenic principle in plant pollens is best preserved by glycerin, or by a medium containing glycerin in appreciable quantity. For this reason pollen extracts for both diagnostic and prophylactic use are put up by some manufacturers in glycerinated form—the diagnostic extracts as a paste in small collapsible tubes, and the prophylactic extracts in liquid form, the diluent being glycerin and boric acid in one case, and



50 per cent glycerin in the other.

The diagnostic extracts are put up singly and in groups, enough in each tube for fifty tests.

The prophylactic extracts are available in dilute form, ready for use ;there is no necessity for the physician to make up his dilutions as required. By withdrawing 1/10 cc. from the vial containing 20 pollen units in each cubic centimeter, he has a dose of 2 units for beginning the prophylactic course. It is an easy matter then to increase the dose, passing in due time from the 20-unit concentration to the 200-unit and thence to the 2000-unit strength.

Some physicians advise a continuance of the treatment beyond the usual 15-dose schedule, claiming better and more lasting results; and it is also claimed that, in case of complete protection following, it may not be necessary to repeat the treatment the following season; or, if there is any question on this score, a skin test may show that further prophylactic treatment is not required. The immunity continues for varying periods, according to the antigenic response of the patient.

Parke, Davis & Co. have a new booklet on Pollen Extracts in Hay Fever.

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### BOOKS

**Asthma, Its Diagnosis and Treatment**, by William S. Thomas, M.D., associate attending physician in immunology, St. Luke's Hospital, New York. Published by Paul B. Hoeber, Inc., New York.

The author has endeavored to present here an up-to-date general review of the present knowledge of asthma. He discusses its nature and causes and its pathology. He describes the methods of examination, tests to be used and their interpretation. He discusses desensitization, autogenous vaccines in bacterial asthma, treatment of pollen asthma, and non-specific radical methods of treatment. The complications of asthma are also described.

**Handbook on Diet** by Eugene E. Marcovici, M.D. Formerly assistant to professor Von Noorden in Vienna: Instructor Post Graduate Hospital, New York, etc. Published by F. A. Davis Company, Philadelphia. Price \$3.50.

This strikes one as being rather an exceptional work on diet. It is both simple and scientific. Diets are arranged for

specific purposes along scientific lines and the reader is made to understand the relationship between the needs in a case and food to be supplied. The author also stresses the importance of first determining the patient's dietary requirement and explains how this information may be acquired.

### A Concentrated and Refined Tetanus Antitoxin

The fact that Tetanus Antitoxin when administered for the relief of a case of developed tetanus must be given in doses of 20,000 units or more makes the question of concentrating the bulk of the serum to the smallest possible dimensions a very urgent one. This is true whether the antitoxin is administered intravenously, when of course no blood need be withdrawn, or intraspinaly, when room must be made in the cord for the dose, and especially when the volume to be administered is considerable.

Biological manufacturers have eliminated one ingredient after another of the antitoxic serum, to reduce its bulk without rendering it too viscous for prompt assimilation. The serum albumin was first thrown out, then a fair proportion of the euglobulin, without in any way affecting the specific activity of the residue—thus proving that the antitoxic principle is neither protein nor true globulin, and that these ingredients of native serum only complicate serum therapy.

The Tetanus Antitoxin now supplied by Parke, Davis & Co. is characterized, the manufacturers claim, by small volume, water-white appearance, and comparative freedom from anaphylactogenic constituents. A booklet on the subject has just been issued by the manufacturers

---

### Copper in Nutrition

The announcement made by a group of biochemical investigators from the University of Wisconsin regarding the function of copper as a supplement to iron for hemoglobin formation under certain conditions, has created much interest. It is important to sound a warning against generalizations on the basis of these observations, for already copper is beginning to be lauded by uncritical and

unscrupulous persons as a cure-all for the entire gamut of the widely different anemias. It was shown that a trace of copper supplied along with iron salts eliminated the anemia hazard from experimental diets fed to rats. Thus, copper appears to be a factor in the building of hemoglobin. For the present it is futile to speculate on the function of copper in nutrition. The most that can be asserted at this time is that we may need to reckon with traces of copper in some of the most fundamental reactions of the organism. (J.A.M.A., June 9, '28).

—R—

### **The Anterior Lobe of the Hypophysis**

In 1921, Evans and Long demonstrated specific endocrine effects, such as gigantism and sex disturbance from parenteral dosage of mammals with beef anterior hypophysis after failure in a long series of massive oral administrations. Putnam, Teel and Benedict have prepared a sterilized extract of the anterior lobe of the hypophysis that has been used in animals with the production of changes which appear to be specific. It serves to repair some and perhaps all of the disabilities produced by hypophysectomy. The extract has been used in one human case of pituitary insufficiency, apparently with temporary benefit. (Jour. A.M.A., June 2, 1928, p. 1791).

—R—

### **Iron in the Treatment of Anemia**

In most cases of nutritional anemia and secondary anemia, and more or less in primary anemia, the administration of iron is of benefit. The administration of iron intravenously or subcutaneously is rarely necessary or desirable. Recent experiments with rats confirm previous work, that small doses of iron are sufficient to cause improvement. In a recent investigation it was found that the best hemoglobin improvement was caused by administering ferric acetate, ferric albuminate, ferric chloride and ferric citrate. (J.A.M.A., June 2, '28).

—R—

### **The Danger of Irradiated Ergosterol**

The experiments of Windaus, Hess and others established the fact that vitamin D is created in ergosterol by ex-

posure to ultraviolet rays. Irradiated ergosterol preparations have been placed on the market but none have been accepted by the Council on Pharmacy and Chemistry. They are offered for use in the prevention of rickets, tetany and osteomalacia, as well as for other real or fancied powers assumed to be associated with vitamin D. Steenbock's researches on the irradiation of foods have shown the possibilities of securing the rickets-preventing factor by the dietary route and manufacturers of foods and the associated advertising agencies now plan to increase the salable qualities of articles of diet with claims for the vitamin D created in the food products. Some pediatricians have viewed with alarm the possibility that too much vitamin D will thus become available to the public in its diet. That the alarm is not without foundation is indicated by a review of researches just completed in Germany, showing that overdoses of vitamin D may have serious effects. A warning is warranted against too great exposure to ultraviolet rays, against too great an intake of vitamin D, A, B or any other vitamins. The public sale and widespread use of such products should await careful clinical tests under controlled conditions. (Jour. A.M.A., June 30, 1928, p. 2105).

—R—

### **Cocaine No Longer Necessary**

Cocaine has been widely used by nose specialists in spite of the toxicity and habit forming tendencies of this dangerous drug. The double purpose for which it is used is to produce anesthesia and to shrink the mucous membranes.

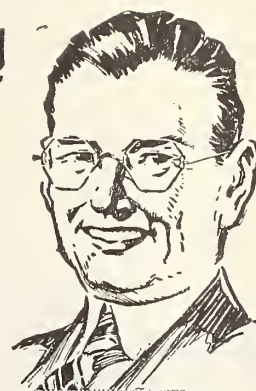
It has now been discovered that a combination of Butyn  $\frac{1}{2}$  per cent and Ephedrine 1 per cent, produces anesthesia and shrinks the mucous membranes, both actions being markedly prolonged with this solution. The dosage used is much less toxic than the concentration of cocaine used to produce equal anesthesia. Butyn-Ephedrine Solution is not habit forming and requires no narcotic blank. It was developed in the Research Department of the Abbott Laboratories, North Chicago, Ill., and is supplied in 1 oz. bottles.



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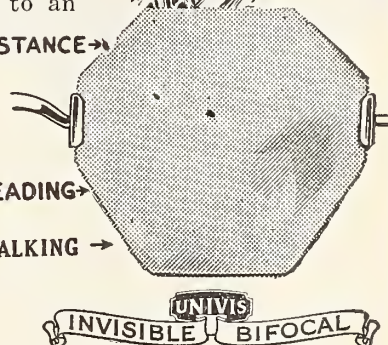
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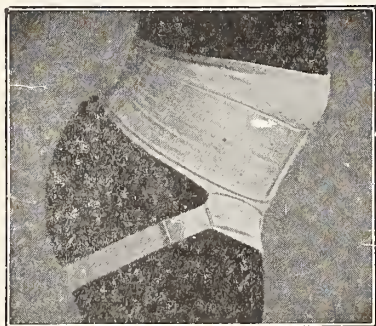
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## RELAXATIVES

✱ ✱ ✱

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To vaccinate, or not to vaccinate—  
That is the question for each English town;  
Whether it is better in the flesh to suffer  
The grievous pains of foul death-dealing smallpox,  
Or to prick arms against a sea of troubles  
And, by a puncture, end them? To vaccinate,  
No more—and by incising say we end  
The smallpox and the thousand pits and holes  
That scar the victims—'tis a consummation  
Devoutly to be wished. The surgeon's knife—  
Or cut—a little lymph;—aye, there's the rub.  
—Vaccination Enquirer.

✱ ✱ ✱

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Patient—Yes, I have been practicing all night.  
—Penn Weekly.

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 It's Doctor this  
 And Doctor that,  
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 Infant Smith's  
 Bowels have missed.  
 Its mother's woes are strong.  
 So it goes  
 Night and day  
 Ringing like a gong.

Doctor's wife  
 Knows the strife  
 Of answering all the time,  
 Doctor's in  
 Doctor's out  
 He can't be found by line.  
 Holy smoke—  
 It's no joke  
 The stork is flying nigh.  
 So it goes  
 With her woes.  
 That poor dear wife of mine.  
 —Elles Noslen.

\* \* \*

Fred—Why doesn't Bob call in the family doctor. He hasn't lost confidence in him, has he?  
 Tom—Oh, no; the doctor has lost confidence in Bob.—Answers, London.

\* \* \*

A medical authority recommends the eating of semi-raw potatoes. Our cook has insisted on this for years.—The Passing Show.

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# THE JOURNAL

of the

## Kansas Medical Society

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TOPEKA, KANSAS, AUGUST, 1928

No. 8

### State Medicine

CHARLES H. LERRIGO, M.D., Topeka

Read before the Kansas Medical Society at its Annual Meeting, May 8-10, 1928, at Wichita, Kansas.

It is because I have some slight realization of the importance and immensity of my subject that I shall quote widely from what has been spoken and written by men with good claim to authority rather than offer many views and opinions of my own.

Let us remember that the words "State Medicine" as at present used in this country mean whatever you choose to read into them. To one man they stand for the governmental control of medicine; to another the subsidizing of the medical profession in the plan of "panel practice" prevailing in England; to another the activities of State Departments of Health, at least in so far as such activities touch the individual; and to another simply "free clinics." It all seems to depend upon what particular "red rag" is calculated to produce the most acute aggravation.

From an article by Louis R. Effler, M.D., Chairman Toledo Academy of Medicine Education Committee, published in the American Medical Association Bulletin for January, 1928, I quote the following:

"'State Medicine' may be defined as referring to the extension of governmental activity in the health field, by creating compulsory health insurance, or free and pay clinics, or distributing physicians, or seeking complete control of medical practice as a public utility.

"Lloyd George's national health insurance act of 1911 is better known in America as the "panel system." This legislation provides that every person with an income below two hundred fifty pounds (approximately \$1,200.00) must carry health insurance with the government. The list of the names and ad-

resses of doctors who have undertaken to treat insured persons is the "panel"—officially known as the medical list.

"In 1924, each insured person paid an annual fee to the government of eleven shillings (approximately \$2.64). This capitation fee continues until the end of 1927. More than fifteen million people are compulsorily insured in the British Isles, and after fourteen years of unhappy experience, both patients and doctors find the system very unsatisfactory. Some of the reasons for the failure of state medicine in England are:

1. It is an enormous expense to the government.

2. It encourages perfunctory, inferior service and inadequate medical treatment. The doctor receives compensation whether his services are good, bad, or indifferent.

3. It develops large numbers of neurotics who run to the doctor with every conceivable ailment, whether real or imaginary. It encourages costly malingering.

4. Public dissatisfaction has resulted in an enormous increase of quackery and cultism.

5. The people lose the right to select their own doctor.

6. It undermines medical initiative, does not recognize merit, forgets the stimulation of medical research and tends to paralyze medical progress.

7. It discourages the ambitious youth from the study of medicine and leaves the field to men of inferior talent."

I have quoted this summing up of the "panel system" because to me it seems to dispose of the question in an unusually satisfactory way and allows me to place that phase of the subject definitely on the shelf. It leaves us, however, with our great problem unsolved, a problem outlined by the Secretary of the American Medical Association, Doc-

tor Olin West, in the following words:

"The one great outstanding problem before the medical profession today is that involved in the delivery of adequate, scientific medical service to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations of life."

Many statisticians have offered figures as to the proportion of illness with which one has to cope in everyday life, and you may take your choice as to their accuracy. For myself, I think it conservative to believe that there are at all times a daily average of three millions of the citizens of the United States ill in bed and five millions more who have a disqualifying if not disabling illness that imperatively demands attention. This, of course, makes no account of the still greater number with remediable defects that are not likely to receive attention because considered of minor character.

From a booklet entitled "Medical Care for a Million People," a report on clinics in New York City, published by "The Committee on Dispensary Development," apparently an outgrowth of the N. Y. Academy of Medicine, one gathers some interesting facts about clinics in New York City. The average number of persons attending clinics in New York City on the usual working day is 20,000, meaning six million visits to clinics in a year, at an estimated expense of \$35,000,000.00 a year. This relates especially to free clinics.

Although clinics in New York City mostly are free they are not all of that class. The report quoted includes the notable experiment of Cornell Medical College Clinic, which is for ambulatory patients and charges \$1.50 per visit and additional fees for x-ray, laboratory tests, medicines, etc., all of which are figured at cost. This big clinic gives service in 22 departments or subdepartments of medicine, surgery and dentistry. In the year ending June 30, 1926, patients at the clinic paid in the sum of \$282,421.00. The current expenses of the clinic amounted to \$279,842.00 so that it was self supporting, and this expense included such amounts as were paid to the clinicians. I am not prepared

to say just what compensation the physicians supplying service for these clinics received, but I believe that the contention of those favoring the expansion of clinics at moderate cost is that the net result would be to put money in the pockets of the physicians.

Cornell is not the only pay clinic in New York City for there are clinics in neuro-psychiatry at the Neurological Institute; pediatrics at the Babies' Hospital; venereal disease at the Brooklyn Hospital; and for health examinations at the Post Graduate Hospital; all of which are on a pay basis.

We are all somewhat familiar with the plan of Group Clinics that has gained remarkable favor in some localities. These clinics really operate on a business basis in which a group of physicians combine with joint use of plant, equipment, assistants, etc. There are over 200 such clinics in reputable operation in this country today.

Commenting upon Group Clinics, the report to which I have referred before doubts whether they should be given "positive encouragement" because "the studies of group clinics have thus far given no indications that such economies as result from the joint use of plant, equipment and personnel have been passed on to the patients in the form of lower costs."

I can almost sense the vibrations of indignation with which some will exclaim, "What business is it of theirs?"

We will let this sink in for a little, coming back to it later, and meantime I will pass on to another phase of the question.

One year ago at the 61st Annual Meeting of the Kansas Medical Society held at Hutchinson, the President's Annual Address was read by Doctor Earle G. Brown who happily combined the function of President of this Society with the office of Secretary of the Kansas State Department of Health. Admirably fitted to speak on problems of State Medicine, he reminded you of certain of the accomplishments of public health endeavor in Kansas. For one thing he produced a table showing that Kansas has the lowest diphtheria death rate in the United States, being for the



year 1925 only 3.5 per 100,000 of population, and for 1926 the very low rate of 2.7. He showed that the typhoid fever death rate per 100,000 population is but 4.5 and the morbidity only 31.9. He reminded you that Kansas has gained in life expectancy so that in 1920 the life expectancy for white males was quoted at a mere fraction under 60 years, and that for white females a slight fraction over 61 years.

He did not quote these things to show you what a clever Health Officer he is or to applaud the work of his predecessors, Doctor Nyberg of Wichita, and that eminent and nationally recognized Health Officer, Doctor S. J. Crumbine now of New York City, but to give concrete evidence of the benefit to society of properly administered official public health procedures.

Yet the activities of the State Department of Health are among the things that some physicians believe to be inimical to their personal welfare. They point, for example, to the fact that immunization against various contagious diseases by vaccination and other processes are conducted by public health departments in such a way that the doctor in private practice is deprived of revenue. There are doctors who are not entirely happy because a citizen who suspects tuberculosis can have a sputum examination made free of charge by the State Laboratory. There are doctors who resent the fact that representatives of the State, County and City Boards of Health examine children and may make arrangements for correction of physical defects.

I realize that I have barely opened this complex problem but time is too short to touch more points. Let us consider what attitude we may assume and what if anything can be done about it.

In the first place, do we want state medicine at all, under any guise whatever. Perhaps you cry very definitely and emphatically "No! a thousand times, no! Let the State leave us alone! Hands off!"

But one moment—Let us not be hasty. Oh, yes; we do want a few laws. We want something that will keep outside

cults from posing as doctors—and we want—and we want—and we want!

Certainly we want things, just as all citizens do. And when we realize this, we can see how absurd as well as despicable is that attitude of "The public be damned" that comes to our ears once in a while. Let us once for all make up our minds that public welfare as it relates to the practice of medicine is a tremendous social problem, one in which the representatives of the public are entitled to be heard. Undoubtedly they *will* be heard and we must give them cordial and sympathetic hearing.

Personally, I do not feel that this country is in any danger from proposals for health insurance such as is carried on in some European countries. I think we are much safer against this than we were ten years ago, I think that the reason for this safety is that in the last ten years doctors interested in both public and personal health have advanced in an enlightened attitude that considers seriously the social side of the whole question. To condemn mass immunization because of some apparent conflict with the pocketbook of an individual is courting social disaster. To recommend it as a measure that will defend the public welfare is to win the confidence of the great mass of intelligent citizens and to inspire in them the feeling that their interests are safe in the hands of the medical profession, without legislative enforcement.

Social workers are right in their contention that it is cheaper and better for both patient and community that disease be dealt with before it fastens upon the patient: in other words, that it be prevented wherever prevention is possible. Having reached this conclusion we may be very sure that in some way preventive measures will be put into effect. One has to remember that ill health is one of the major causes of poverty and that both the relief and prevention of poverty depend largely upon adequate medical care. Social agencies insist that it is their business to see that this is provided. They look to the medical profession to help. It is idle to say that the doctor engaged in private practice is fully able and willing to give this serv-

ice of prevention. He may help but under existing medical ethics he cannot go very far.

Preventive medicine does not become effective simply because a doctor equips himself thoroughly and is prepared to give his services. There must be an intermediary. Someone must "go out into the highways and hedges and compel them to come in." When immunization depends for its success upon universal acceptance there must be a united effort, under official guidance. When prevention of tuberculosis can only be accomplished by seeking "suspects" in their own homes and bringing them for examination long before the symptoms of disease scare them into seeking a doctor, it is evident that some intermediate agency must be employed. May all the saints of medicine forefend the day when doctors in private practice shall seek "contacts" from house to house as the successful tuberculosis worker now does, or undertake wholesale vaccination as does the effective health officer. One has only to think of it to foresee untold complications.

Let me give you a few words from a paper presented to the Indiana Health Officers' Conference, September 27, 1927, by Doctor John E. Monger, State Health Commissioner of Ohio.

"It doesn't make a continental's difference whether we, as doctors, like the Public Health movement, or not. It is here, and it will stay, and it will grow regardless of any attitude we may take. Tell a mother that twice as many children are dying as should die during the first year of life, and you arouse her interest. When people realize that diphtheria, scarlet fever, typhoid and smallpox are largely preventable, and they are not being prevented, they will ask somebody 'How come?' And that 'somebody' will be we doctors.

"Boiled down, the whole thing of state medicine is one of medical economics and those who profess to fear it do not know their medical economics. Many sense that there is something seismic in character happening to our profession, and failing to sense the cause of this change, they refuse to think, they become panic-stricken, they begin tearing

their hair, shrieking that this terrible goblin of state medicine will 'catch you if you don't watch out.' And the pitiful part of the whole picture is that it will. The best defense, however, against this thing if it is to be feared, is a well conducted Health Department. None of those who pretend to fear this goblin are quite clear as to what they mean by State Medicine, and the peculiar thing is that because the word 'clinic' has been hung onto so many Public Health activities, they jump to the conclusion that Public Health Administration is the entering wedge.

"We are not German. We are not English. We are Americans, and you simply cannot tell an American that he must do thus and so. If you do, he will not do it just to show you he is an American."

What shall we do about it? Shall we do anything?

This great problem is not one peculiar to our State. It engages nation-wide attention. No doubt most of you have heard of the new "Committee on the Cost of Medical Care," and know that this Committee, under the able leadership of Doctor Ray Lyman Wilbur is just beginning a very substantial and deliberate five years of study calculated to deal with the problem in a manner commensurate with its importance. But that will not be presented for five years. What shall we do right now? Can we do anything at this time?

If you read the December, 1927, American Medical Association Bulletin you observed that the place of honor—the very first page—was given to Doctor W. E. McVey, our own editor, with a reprint of his article "No Conflict Necessary." I quote part of his words:

"Certainly the medical profession is under obligation to co-operate with public health agencies in every reasonable manner in the efforts to control and prevent disease. Certainly the important service given by the medical profession in the administration of public health regulations justifies careful consideration of the rights and privileges of practitioners when any program is prepared by public health agencies. Organized medicine can restore and maintain har-



mony between these two great bodies of medical men, can safeguard the interests of practitioners and give to the public health service every co-operation required. The county societies are the local units of organized medicine and they should not only take an active interest in public health matters but they should sponsor every campaign for immunization.

"Since the county society represents the best medical men in the county and usually includes the county health officer—if he is a live one—there is no reason for any conflict of interests."—The Journal of the Kansas Medical Society.

The foregoing relates particularly to official health agencies. It is the way of common sense. "Certainly the medical professional is under obligation to co-operate with public health agencies. They should not only take an active interest—they should sponsor." The same method is applicable in dealing with the voluntary health agencies.

In at least one State Medical Society—that of New York—the effort is being made to carry this out. In effect their plan provides that the County Medical Society shall designate certain of its members to study and consider any program of health activities promoted by a volunteer health agency. The volunteer health agency on its part agrees to submit its program of activities to the County Medical Society. In this way the society becomes a guiding agent and also secures the strength of the volunteer agency back of its own program. Matters in dispute are adjusted through conference between the parent body of the volunteer agency and the State Medical Society.

"Is that all?" you may ask. "Doesn't that leave us very much as we were before?"

I think not. The profession of medicine has nothing to fear from any agency which it can meet on equal grounds. Official public health work is directed by doctors. You know how to deal with them and how ready they will be to have your co-operation. You will find the volunteer agencies no less ready. You can control their health activities. You should be willing to do

so. Please bear this in mind, however. Co-operation has more than one side. To speak of co-operation when you have nothing more in mind than the protection of your own interests is absurd. These social workers are as devoted to their projects as you are to the profession of medicine. Most of them are volunteer workers. Many put in more hours of gratuitous service than even the much abused doctor. They will welcome your aid but you must meet them as a friendly adviser with a real interest in their aims. They will be quick to see your side of the matter. In almost every case they are educated people of keen perception and wide sympathies. You have a real opportunity to guide them if you will.

The way to handle the bogey of State Medicine is to step out and meet it. We should control it, we should regulate it, we should keep it within our own hands, and always should we remember that "the one great outstanding problem before the medical profession today is that involved in the delivery of adequate, scientific medical service to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations of life."

—R—

### **The Uses and Abuses of Free Medical Service**

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Read before the Kansas Medical Society at its Annual Meeting, May 8-10, 1928, at Wichita, Kansas.

In approaching the subject announced it seems to me that a brief review of medical economics or the present trend of economic affairs as they affect the physician is essential.

The medical profession is the only profession, business, trade or art that gives its best thought to those things that tend to lower the amount of business done, and curtail their gross income. In other words the physician gives his time, his talent, and spends his money for the success of efforts that he knows will help destroy his business and lower his income. But these things do not deter him when he knows it is for the good of humanity.

There is a humanitarian element to the practice of medicine, and no true

physician would have this element entirely removed if he could, but we must ask ourselves the question: Have we not let our humanitarianism carry us far past the line of justice and safety? Let us think of what the medical profession has done for the laity, and what it has received in return.

Diphtheria, the greatest scourge to infancy and childhood has been conquered, and now by the toxin-antitoxin method of immunization, no child need have diphtheria, and whole communities and cities are being immunized at public expense. The physician pays his taxes.

Typhoid fever the worst enemy of our armies, has almost disappeared by the use of typhoid vaccine. Even in my short experience every physician in general practice expected to see a number of cases each summer. In one season in our city I treated twenty-seven cases of typhoid fever and now I don't average one case a year. The yellow fever which conquered Spain in Panama, and defeated the building of the canal, has almost ceased to exist, and many others might be mentioned, but this is public knowledge. Thanks to our profession.

But new conditions are coming up. Almost every business employing labor has its own physician and nurses, and furnishes free medical aid to all employes through group insurance. Just last month I was called by the manager of a firm in our city to treat an injured employe, after about a week I was called by the attorney for the insurance company, informing me that as I was not their physician, they denied all responsibility for the outcome of the injury or my fee so long as he was under my care. Most of these insurance companies maintain a fee list much below the average fee in the community, to the detriment of the profession at large and for the benefit of a few who are willing to work for less. The insurance companies are giving free periodic health examinations to keep their policy holders physically fit to lower their mortality rate, and increase their expectancy. If we tune in on our radios at the proper time nearly every day we will hear free health advice for everybody. Much of it, of course, is worth about as much as it costs.

The Ostios and the Chiros are making inroads on the regular profession by their glowing advertisements, and promises impossible of fulfilment. And while this is going on, we the medical profession who have made all these things possible sit by and see our income, where-by we may live in comfort, educate our children and put by a competency for the inevitable rainy day, slowly slipping away.

One of the agencies that work against the medical profession is the free clinic as now organized and managed. I do not wish to be misunderstood as being against the free clinic, and this is no criticism of same if properly managed. It is a worthy and useful charity, and is so recognized by the profession. It is not to the uses of the clinic, but to the abuses we object. When a patient poor and sick knocks at the door of the clinic, he should be admitted and ministered to and given every privilege and service possible, that his suffering may be relieved and his infirmity cured so that he may speedily return to his vocation. Free clinics are established and maintained for these and these alone, and only such are entitled to their services. It seems to me that any one able to pay for his medical service and takes that offered free to the unfortunate is in the language of Dr. Hassig, "a cheap grafter," wholly devoid of the principles of honesty and self respect. It may at times be ignorance or thoughtlessness, but more of just the dishonest idea of getting something for nothing.

Let us consider the different classes of patients who visit the free clinic.

1. There is the extremely poor who, from lack of employment, misfortune or large families, must be cared for by charity or allowed to go untreated, for these the medical profession has nothing but pity, and will give their best thought and effort gladly and freely.

2. There are those and the number is not a few who visit the free clinic because they can get there the expert attention they desire, but cannot afford to pay the high fees for special private care. Who in many instances would and could pay a smaller fee if permissible. But the way clinics are organized they



must be treated free or not at all. In consideration of this class, some clinics are trying to arrange a part pay department which so far has not been a striking success, but only causes further confusion. It seems to me that charity and private practice must remain apart and distinct, one from the other.

3. The class who like the poor we have with us always, and the number of which seems to be increasing, those who deliberately, not of necessity, but with malice aforethought set out to get something for nothing. These of course should be summarily dealt with and refused all free care, but who is to decide? Certainly not the physician whose business with the clinic is solely to diagnose and treat disease, but he should be assured in the giving of his time and talent that he will not be imposed upon, and should have a word in the general rules of the clinic in which he works.

Recently the Chicago Medical Society took the stand that they would render free medical service only to those individuals who were recipients of some other form of charity, whether this will work out satisfactory or not remains to be seen. The trouble in carrying out any recommendations so far proposed is that each individual case must be rejected or accepted upon its merits without time or opportunity to investigate the real status of the patient, and as the tendency is to leniency we had better care for some unworthy than turn away any who are worthy. No fixed or arbitrary standards can be fixed. On the other hand organizations for the dispensing of medical charity in an effort to expand their work, educate the public or increase their income, adopt policies that are a distinct imposition upon the good nature of the profession, and it behooves us to oppose all such extensions as unfair to us, and pointing toward socialized medicine. In our out-patient maternity department at Bethany Hospital, I picked out two of my own private patients, both I had confined before as pay patients, and both were able to pay a nominal obstetrical fee, but were there solely to save the price of medical care, neither expected to find me in the clinic, and both left not to return. One I after-

wards confined in her home and was paid for the service. The other may have gone to some other clinic. This abuse of the free clinic and imposition upon the profession, taking their time and effort free by those able to pay, and diverting the fee that should rightfully go to the doctor into wrong channels, is not best for the patient morally or the physician financially.

This we are told is one of the most prosperous times in American history, yet we seem to have more need for charity than ever before, especially medical charity.

According to Dr. Breakstone of Chicago, in the United States in 1922 more than thirty million people visited free dispensaries, more than one out of every four of our population. Where is our boasted prosperity and boasted independence when more than one out of every four of our people are objects of charity. Much of this we are forced to believe is not necessary charity, but a rank imposition upon the medical profession. Other organizations are making unnecessary inroads on the profession: The Parent Teachers Association; the visiting nurses organizations; the school nurses in our cities who do not only school nursing work, but presume to diagnose and prescribe treatment in many cases; our Board of Health who are now proposing to look after the unfit child under school age, that they may enter school in good physical condition; are all depending very largely upon the work of physicians, donated of course, to carry out their plans.

I feel that it is time that we protest the activities of many of our school nurses. Several times this winter I have been called to see children and found a bottle of 15 per cent argyrol being dropped into the child's nose several times a day, or a 3 or 4 per cent solution of mercurochrome being used in dressings upon the recommendation of the school nurse. Diagnosis and treatment of the sick is the prerogative of the trained physician, and he alone. Our visiting nurses association publishes yearly or oftener reports of their activities, the number of calls made, the number of patients sent or taken to the free clinics,

amount of money expended, names of the officers and directors in a conspicuous place on the report. These organizations all pose as charitable organizations, and apply for and receive financial help from the community chest or what ever may be the name of the central organization that collects and distributes the money. If we investigate we will find that when any of these organizations find a poor hungry, cold, sick family in their territory, they send them some coal, a package of groceries, go to the store and buy shoes, clothing or what is needed. All paid for at the regular market price. Yes they do one more thing, they call up some kind hearted doctor, and they are all kind hearted when sickness and suffering are concerned, and ask them to see the sick ones, and prescribe for them. Prescriptions are filled at the nearby drug store and paid for by the organization, but what does the doctor get? Just nothing, that is all. Yet when these charity drives are being made the doctor who refuses to donate is branded as a "tight wad" or something worse. I realize that many times diagnosis is very much easier than treatment, and what is to be gained by talking about these abuses of a good thing unless we do at least try to work out a remedy.

In the first place I would suggest that the present economic state of the medical profession is largely their own fault. We must get out of our minds the idea that the practice of medicine is an art and not a business. It is both when it comes down to fundamentals. We know that men work to obtain life's necessities, comforts or luxuries for themselves, and those dependent upon them.

The usefulness of dispensaries as a form of organized medical charity in themselves and as hospital adjuncts, and the value of these outpatients to medical education must be considered as established. The great possibilities of such institutions in the development of prophylactic and community medicine are just beginning to be recognized. But on the other hand one cannot commend the organization and efficiency of the majority of our existing general dispensaries. Those able to pay have been ad-

mitted too often for treatment. Too many physicians have used their appointments purely for personal gain of various sorts, disregarding all opportunities for service to humanity or to the community. In too many institutions the greed for clinical material has stifled consideration for fellow-practitioner or for the people themselves. In such clinics the patients are but grist for a mill that throws all but pathology out with the chaff. In the unfortunate men, women and children who come to our clinics there surely must be something besides pathology that charity, sociology or public health will find worth the working, even as a by-product, that the gain to society may be the greater. The just protests of the medical profession in active practice against the pauperizing of the people, against the cheapening of medical services and against the invasion into their paying clientele has too often been met with sharp retorts only. Dispensaries must do more good and less harm and soon acquire greater efficiency, or the forces behind modern sociology, scientific benevolence and the agencies working in the interests of public health, will devise and develop a substitute.

Preliminary to all other reforms, dispensaries must recognize the established principle of our better hospitals, that the medical treatment and the sociologic management of patients must be completely separated. The medical staff of dispensaries must have undivided authority to prescribe the medical treatment for the patients placed in their care, but there should be an executive or sociologic chief and assistants in every dispensary having unquestioned authority in all matters pertaining to admissions, and direct control of the efforts to better the social condition of the patient, of his family and of the community. It is true that the executive or sociologic staff of hospitals has not as a whole been so progressive or so thorough as the medical, and there has come in this country the social service movement as a rebuke to our medical institutions for the narrowness of their service and the meagerness of the so-



ciologic effort; but the principle has been established.

It is time for us to apply a few business principles to our work and decide definitely and permanently that we will no longer be imposed upon under cover of sentiment. The doctor receives bills promptly on the first of each month, and is expected to produce, and that he may meet his obligations and retain his self-respect and the respect of the community must devise some way to convert his time and talent into cash.

Shall we as physicians quit doing charity work? Never! But we can insist that the work we do for nothing be worthy charity. Every organization that asks us to donate our time and energy must assume the obligation of separating the worthy from the unworthy, whether by personal investigation or an alert social service department is immaterial to us, but we must be assured that our good intentions will not be imposed upon.

I wish to acknowledge and express my appreciation to the Library Dept. of the A.M.A. for some of the material used. The author is acknowledged when known, but as some of the material was editorial without the author's name, I wish to thank the A.M.A. for same.

—R—

### Complications Produced by Bismuth in the Treatment of Syphilis

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Bolgar (1889), Santon (1916), Robert Laxeral, Sagerae, and Levaditi (1921), are responsible in a large measure for the use of Bismuth in the therapy of syphilis. The efficiency of this type of metal in the treatment of syphilis has not been determined. Nevertheless, there are certain dangers in its use and the problem of this paper is an attempt to control those untoward symptoms.

Experimentally and clinically, bismuth has been given by four methods; orally, by friction, intravenously and intramuscularly. The first two methods were soon discarded and the third after a short trial was given up on account of its toxic action and blood destroying properties. The intramuscular route remains as the best method for administering this form of treatment.

Many different compounds of the

metal have been tried, varying from the precipitated metal to complex formulas, and even to the use of proteid combinations which are very toxic.

The following list represents the favorite mixtures.

- Bismuth colloidal
- \*Bismuth metallic
- Bismuth Hydroxide
- Bismuth Amalgam
- Bismuth Succinate
- \*Bismuth Salicylate
- Bismuth Subgallate
- Bismuth Palmitate
- Bismuth Oxychloride
- Bismuth Cacodylate
- \*Bismuth Iodoquinine
- Bismuth Trioxo and benzoate
- Bismuth Oleate
- \*Potassium and Sodium Tartro Bismuthate
- \*Bismuth Phenyl Formitate.

The compounds indicated by stars find more favor in this country.

#### DEPOSITION OF BISMUTH IN THE BODY

Akamatsu (1921), states that the kidneys of animals poisoned with bismuth contain the greatest amount of this metal; then the livers, colons, stomachs and small intestines. The distribution is variable depending upon the bismuth compound used. Later investigation will probably show that some bismuth is deposited in the bones. Luke and Klauder found greater changes in the kidney and liver than in any of the other organs.

#### EXCRETION OF BISMUTH

The bismuth is excreted in the urine and feces. In the urine in the form of the phosphate and the sulphid. In this respect it resembles excreted lead. And like lead, bismuth is probably deposited in the bone as bismuth phosphate until the calcium metabolism is increased when it is thrown out as some combination of bismuth and phosphorus.

Kurthy, L. and Muller, H. (1927), demonstrated the fact that in the intramuscular injection of bismuth the elimination was slow, (20 per cent being excreted in four weeks; 58.8 per cent in the urine, 41.2 per cent in the feces). This conclusion was arrived at by chemical means. Cole has also called attention to the slow excretion of bismuth.

## BISMUTH AND THE CEREBROSPINAL FLUIDS

The literature on this subject is very meager, the work already done giving very little information of value. So far, no one has proven that bismuth has been found in appreciable amounts in the cerebrospinal fluid.

## ACTION OF BISMUTH ON THE BLOOD AND HEMOPOEITIC ORGANS

Betz states that in 25 cases of primary and secondary syphilis under bismuth treatment there was a definite destruction of hemoglobin color index less than one. That at first there was an increase in leukocytes which he ascribed to toxic disturbances, but later a lymphocytosis supervened which was probably due to an allergic manifestation. This finding is confirmed by the work of Amantea.

## MANIFESTATION OF BISMUTH INTOXICATION STOMATITIS

Stomatitis is the earliest manifestation of an intolerance to bismuth. It has been found by Azoulay that a total of 3 gms. injected in 50 centigr. doses every two or three days invariably produces this condition, and usually after the first dose. He divides stomatitis into three stages; first, a fine, black deposit near the gingival border along the lower gum forming around the neck of the teeth, first the incisors, then the canines, and lastly the molars. The mucous membrane, opposite the gum border, often shows dark patches producing a condition not unlike the "gum of a dog." The tongue sometimes shows fine lines at the edge. The condition is accentuated near broken decayed teeth or areas of pyorrheal pockets. Second, the continuation of bismuth therapy produces the second stage of stomatitis characterized by ulceration, pain and swelling. The lower gum becomes swollen and painful, and pressure causes pus to form around the neck of the tooth. This soon forms fine ulcerations at the edge of the gum which may progress to large ulcers with greenish pseudo membranous phases. Rarely does massive necrosis develop. In some instances the ridge of the lower gingival border becomes intensely red and the capillaries are enlarged in size and number, (Lournier). The third stage is that of fetid breath, swelling and enlargement of the neigh-

boring lymph glands from septic absorption. Hueldo, Bordet and Bolinger Pilet found that 30 per cent of their cases developed stomatitis. The bismuth stomatitis resembles a mixture of lead and mercury stomatitis. The mechanics of the line formation is the same as that of lead. The bismuth is probably deposited in the superficial capillary loops as the sulphide. At the same time, it probably loosens the peridental membrane of the tooth and allows the Vincent's spirillum to gain entrance. We must, therefore, ascribe a large part of the process to this organism which is present in the mouths of all those suffering from pyorrhea.

*Predisposing factors:*

- (a) Faulty oral hygiene.
- (b) Decayed and broken teeth.
- (c) Pyorrhea alveolaris.
- (d) The use of tobacco, alcohol and sweets.

*Prodromal Signs:*

- (a) Excess salivation.
- (b) Metallic taste in the mouth.
- (c) Feeling of soreness in the root sockets of the teeth.
- (d) Beginning pigmentation of gums, mucous membrane or tongue.

*Treatment:*

- (a) Strict oral hygiene using chlorinated mouth wash and energetic brushing.
- (b) Extraction of all hopelessly decayed teeth or those with focal infection; the cleaning up of pyorrhea pockets, removal of all tar from the gums.
- (c) Discontinuance of tobacco.
- (d) Diet rich in milk and therefore rich in calcium.
- (e) The intravenous use of small doses of neoarsphenamine. The intravenous use of two or three 0.45 gm. of sodium thiosulphate on alternate days.

The use of neoarsphenamine has been advocated by several workers for two reasons:

- (a) They have never observed stomatitis in a patient who was receiving neoarsphenamine.



- (b) Neoarsphenamine is almost a specific for Vincent's spirillum which is a large factor in the production of bismuth and mercury stomatitis.

Semon (1924), reports two cases of bismuth stomatitis treated successfully by the intravenous use of sodium thiosulphate. The author has successfully treated cases of this type with sodium thiosulphate. The action of this salt is probably specific; at least, it hastens the excretion of the bismuth.

#### KIDNEY MANIFESTATIONS

Polyuria and nocturia are two of the best symptoms of bismuth saturation and may be signs of an impending nephritis. Blum and others have described severe cases of nephritis following the use of bismuth salts in the treatment of syphilis. Albumen casts, both granular and epithelial, were demonstrated in the urine. Since the kidney cells have an especial affinity for the bismuth compounds one would naturally conclude that the kidneys would be the first organs seriously affected. Fischer has shown that 88 cases out of 102 treated with bismuth intravenously have shown some kidney changes. He believes this condition is brought about by the cumulative effect of the bismuth in the kidneys.

#### CONTRAINDICATION TO THE USE OF BISMUTH

- (a) Acute nephritis.
- (b) Chronic nephritis.
- (c) Tuberculosis of the kidney.
- (d) Acute or chronic infections.
- (e) Any condition which cuts down the excretory power of the kidney.

#### TREATMENT CONSISTS IN

- (a) Discontinuance of bismuth therapy.
- (b) Diet rich in calcium (milk), in vitamins (vegetables and fruits), and in carbohydrates.
- (c) Alkaline fluids at least 3000 c.c. a day.

It has been noted that bismuth injections nearly always increases kidney disease, and fatty casts, epithelial cells are always found in the urine before the albumen makes its appearance.

#### ENTERITIS

This condition is rarely precipitated in the bismuth treatment of syphilis. When it does occur the symptoms are mild and fleeting, resembling the prodromal symptoms of sub-acute lead poisoning. Akamatsu has shown that bismuth produces blackish brown discoloration of the gastric mucosa, the small intestine is not involved.

#### LIVER

A few cases of icterus have been reported after the use of bismuth. In some of these cases arsphenamine was also used so that the case was not clear against bismuth. Liver injury is very remote under the present bismuth regime.

#### INJURIES TO THE SKIN

(a) The Jarisch-Herxheimer reaction of luetic exanthem usually occurs in bismuth treatment after repeated injections. It progresses towards its crisis slowly and subsides slowly as after salvarsan. On the other hand, the reaction may immediately follow the first injection.

(b) Functional disturbances without objective manifestation pass as pruritis, which is localized either at the place of injection or in any other part of the body.

#### *Urticaria:*

(c) The earliest and most fleeting form of exanthem which occurs at the beginning or in the progress of a bismuth course is urticaria. It does not generally appear on the day of the injection, but upon the following day. It may remain circumscribed or become generalized, and usually lasts 24 to 48 hours. Generally it is accompanied by rise in temperature and feeling of illness. These manifestations have been described by various authors after the administration of nadisan. Quinby, bismogenol, intramuscular injections of bismuth hydroxyd and intravenous injections with colloidal bismuth.

#### *Exanthems:*

(d) Fleeting symptoms resembling measles may occur locally or generally, occasionally they persist for a few days.

Papulosquamous eruptions are more likely to occur after the intravenous administration of bismuth salts and very

rarely after the intramuscular injection.

Scarletiform eruptions, sometimes severe in character, are occasionally encountered. These manifestations are more likely to occur if the patient has suffered a previous arsphenamine dermatitis.

*Bismuth Dermatitis* resembles arsphenamine dermatitis in the variety and unequal severity of its manifestations, although the former is not so prone to produce these conditions.

Dermatitis exfoliativa (bismuth), occurs in very rare instances and should be treated in the same manner as arsphenamine dermatitis.

Dermatitis of vesicular type, ranging from heat rash to bullous eruptions have occurred.

Pigmentations ranging in size from a pinhead to a dime have been reported.

Hemorrhagic eruptions of the skin, ranging in size from pinpoint to pea are occasionally seen.

#### INJURIES TO THE NERVOUS SYSTEM

A fixation of bismuth in the brain after anti-syphilitic treatment was established by LeMay and Jaloustre. Positive bismuth findings in the cerebrospinal fluid were recently doubted by Jeanselme, Delalande and Terris, who found normal as well as pathologic meninges impervious for bismuth.

The manifestations which appear immediately after the injection, mostly after intravenous injections, are referred to disturbances of the vegetative nervous system. They consist of dizziness, ringing in the ears, pessimistic outlook, palpitations, choking feeling, abundant perspiration, conjunctivitis, and other conditions which may go under the name of complex angioneurotic symptoms and the nitroid crisis of salvarsan.

Rarely do any nervous manifestations present themselves at the beginning of bismuth therapy, but after long continued use, the following manifestations may become obvious.

(a) Headaches at back of head, which may be due to meningismus.

(b) Excitement leading to loss of sleep, dizziness, muscular pains, shooting pains in joints in different parts of the body. These symptoms die down

only to be reactivated by each fresh dose of bismuth.

(c) Accentuation of a tabetic's pains or a paretic's speech difficulties.

(d) Tingling of extremities which may progress into numbness of fingers or toes and may last for many months.

1. When bismuth is used within the kidney excretory limit of 4 mg. per day it is a very safe metal to use in the treatment of syphilis.

2. Occasionally its use will produce varying degrees of nephritis, hepatitis, dermatitis, stomatitis, neuritis and various other manifestations.

3. Contraindications to its use are nephritis, hepatitis, or any disease that affects the efficiency of the excretory organs.

4. Prevention of untoward symptoms consists in strict oral hygiene, proper diet, good elimination and cessation of bismuth if untoward signs make their appearance.

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## The Problem of the Occipito-Posterior

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Read before the Lyon County Medical Society, April 3, 1928.

A thoughtful consideration of the problems of foetal mortality, and maternal mortality and morbidity is very interesting and often not very complimentary to the branch of the medical profession responsible for their care during the period of gestation, delivery and the puerperium. The young primipara is told that frequent visits to her doctor will insure her safe delivery, which is often far from the truth when more often than not the sample she brings is dumped into the sink—"Sink Test." Her blood pressure is never taken, no pelvic or foetal measurements are made, no attempt is made to outline the foetal position and this trusting young woman is allowed to drift. Often she enters labor without any knowledge of what lies out before her, and many times her physician has no idea of the relation between the size of the passage and the passenger. Here let me plead for a better understanding of foetal and pelvic measurements. There is no excuse for a doctor to be forced into a cesarean section or a craniotomy after his patient has exhausted herself in a fruitless attempt to force a nine pound baby through a seven pound pelvis. We all know that the amount of moulding of the foetal head is an unknown quantity, but we can know when we have a borderline case and be prepared to act before the damage is done. We also know that when 100,000 babies, not still born, die every year in this country of ours during the first year of life and nearly 17 out of every thousand mothers perish, something is radically wrong with the practice of this branch of surgery. When we consider that in spite of our boasted advance in technique, and the low mortality in our hospitals, the general mortality in O. B. work generally is not improving very rapidly. It seems to me a partial ex-

planation would be that obstetric practice is becoming more pathological all the time and most of the babies are, and probably always will be, delivered in the homes by the general practitioner, and his training is not keeping pace with the increase in the number of pathological cases found. Few men routinely examine the foetal heart during labor yet it tells much to the trained ear and the educated mind. We all know that a foetal heart below 110 or above 160 is a danger signal that the foetus is in distress, yet how few avail themselves of this valuable symptom.

A few simple measurements which can be learned in a few moments and mastered in a little while may make the difference between a living and a dead baby, or an exhausted and badly lacerated mother and one with a normal puerperium.

I was much gratified in looking over our record at Bethany Hospital, and note the number of cases when the estimated pre-delivery weight, and the actual weight of the baby differed only a few ounces, and the few times we were required to change our diagnosis as to the presenting part.

While the study of this wide field is interesting and instructive yet I feel it is much too wide to be covered in one evening's study so I want to confine myself to this one subject. "The Problem of the Occipito-Posterior Position."

I know that we read that 90 per cent of these cases will rotate if let alone, maybe they would if left long enough. I can frankly say that this is not my experience and many of these cases, 50 per cent I should say, will go far beyond the line of safety of mother and baby before spontaneous rotation takes place. Many will not rotate no matter how long left.

Of my last one-hundred deliveries, twenty-seven have been occipito-posterior; twenty were delivered by version, and seven by Scanzoni maneuver or double application of forceps. On the one-hundred cases, twenty-three were versions and fifteen forceps, one eclampsia, two placenta previa, and eight delayed descent of head required a low or mid forceps.

What are the symptoms of occipito-

posterior presentation? Early rupture of the membranes is often the first thing to attract our attention, with the loss of fluid with each pain or movement, owing to head's inability to mould and so plug the cervix. A head floating free above the pubic arch after a considerable time of dilating pains. The pains are often characteristic, more lancinating or sharper we should say; not bearing down or expulsive, and as the uterus tires, become further apart or become a dull aching in the pelvis almost unbearable.

The position of the foetal heart may help, often being low in the flank instead of in the usual position, but many times the heart is heard in the normal position. The best method of diagnosis is to my mind a thorough, careful, painstaking vaginal examination, under aseptic and antiseptic precautions. I know the drift has been toward the rectal examination, but the strongest advocates of the rectal examination make vaginal examinations when they really want to find out conditions as they exist. In my judgment a vaginal examination, when properly made, is just as safe as far as infection is concerned as the other; is much more comfortable to the patient, and the information gained much greater. I make no rectal examinations because I don't know how, and not knowing how, I get no information in the attempt. Now the question comes after we have measured both mother and foetus and are satisfied that a delivery can be made through the natural channel with comparative safety. Our patient has honestly tried to deliver herself, and is getting tired, perhaps the foetal heart is getting too slow or too fast. What shall we do? There are four courses open for us:

1. Let the patient continue to labor, hoping spontaneous rotation will take place by resting her with morphine, or scopolamin or nitrous-oxid gas.

2. Delivery with forceps, by rotating the head with the hand in the uterus and while an assistant holds it anterior, or tries to hold it; apply the forceps, or apply the forceps carefully, and use them as rotators, the so called Scanzoni maneuver. Removing and reapplying the forceps to the head in the anterior posi-

tion, a procedure that is most gratifying when it works, but it cannot always be done.

3. Version, inserting the hand into the uterus, grasping a foot and turning the foetus at the same time, bringing a foot or both feet through the cervix to the vulva.

4. Cesarean section which may be impractical for a number of reasons, as section is a major operation, not justifiable when other safer means are at hand, and the patient may have been made unfit for operation by improper handling.

Now I want to plead guilty to being a version enthusiast, I like to do them. I get good results, and I believe I know how, and every man should know his limitations, and do the thing that he can do best. I do not wish to go to the extreme of Potter yet the world of medicine knows that Dr. Potter has given us the best technique ever worked out for version. I have never done a version to eliminate the second stage of labor, but in persistent occipito-posterior, and in my judgment they are persistent when the patient begins to tire and there is no advancement of the head; transverse positions, partial or complete cessation of pain which means a tired uterus; shoulder, face and other malpositions that retard delivery, delay descent and cause the mother an undue amount of suffering, weakening her for the ordeal of operative delivery; version is the safest and often the only procedure offering relief to the patient. A great deal now is being written on version, some extremely radical.

I cannot agree with Dr. Hertzler of Newton, when he says, he will not accept a certain number of centimeters as the *sine qua non* for the employment of any procedure, but believes that we should avail ourselves of everything that is best for the welfare of our patients.

What are some of the dangers or contra-indications for version?

1. Danger of sepsis. The greatest of the two greatest dangers in obstetric practice, yet sepsis can almost always be prevented by a proper technique. I cannot now recall a single case of infection in my practice following version,



and with the proper preparation of the patient it is as safe or safer than high forceps, or any other intra uterine manipulation. These patients must be as carefully prepared as for a laparotomy or other major surgical procedure.

2. Rupture of the uterus. This danger has it seems to me been exaggerated, and usually occurs in neglected cases where the fluid has all drained away; maybe many hours before and the uterus is in tonic contraction when any manipulation would be dangerous, and on the other hand, the patient must be under complete surgical anesthesia of which I will speak later. In ruptured uteri, the rupture takes place in the lower uterine segment; not from the version, but from the case being neglected until the lower uterine segment is tired, thinned out, and almost paralyzed. In a case like this forceps blades would be much more apt to rupture than version. I have never seen a ruptured uterus during version, and I am sure in careful hands it seldom occurs.

3. Birth injuries. I have had two fractures following version, one clavicle, and one humerus and I assume all the responsibility of same. Both healed nicely with no deformity or disability; both were a number of years ago, and I am sure would not happen now.

4. Danger in the after coming head. This danger it seems to me has been greatly exaggerated, as we all know a head will pass through the birth canal easier following the body than before, provided there is no disproportion between the size of the head and body, as hydro-cephalus, or mostrosity; besides by carrying the baby's body up over the mothers abdomen with a finger in its mouth, and pressure over the fundus of the uterus, gives a leverage you cannot get simply from uterine contractions or traction by forceps. I have never used forceps but once on an after coming head, although I always have been ready in case of need, and I have never lost a baby from this cause, although I delivered a twelve pound baby from a seventeen year old girl last summer by version. There may be others, but it seems to me none of such magnitude as to deter

us from using this valuable operation whenever indicated.

When we have decided after maternal and foetal measurements, and we have determined there is no prohibitive disproportion between the size of the head and the birth canal, that the head is in a posterior position, and floating free above the pubes, making a forceps delivery difficult and dangerous to both mother and child—"a high forceps", and let me say here and now that in my judgment high forceps deliveries, as performed in a majority of cases, is little short of criminal, and I wish the term "high forceps" might be dropped from our obstetrical nomenclature—our patient is tired and begs for relief. All right let's do a version. How shall we proceed?

In properly prepared cases the bowels have been thoroughly emptied before this time. The patient is prepared as for any other major surgical procedure, and anesthetized to a surgical degree, preferably with ethel chloride followed by ether, in the hands of some one who knows how to give it. It is the safest and best anesthetic. I have not seen a chloroform anesthetic for years, as advocated in a paper I read a short time ago. The patient is placed in low stirrups. Potter uses the modified Walcher position with the legs being held by assistant or the feet resting on chairs, but we use the ordinary delivery table with the stirrup low. After the patient is asleep the entire field is sprayed with 4 per cent mercurochrome, the same solution having been instilled into the vagina at the first preparation. The patient is always catheterized after she is asleep. This is important even though she may have voided a short time before, as often some urine remains in the bladder, enough to be in the way during delivery.

The operator is prepared as he would be for a laparotomy, only he has on gloves like this instead of wrist length. He irons out the perineum and vagina after the Potter method, not using too much force to rupture the mucous membrane of the vagina. After the vagina and perineum are fully dilated the operator gently inserts his well lubricated

hand into the uterus, pushing the head aside, his hand travels up along the abdominal aspect of the child past hands until he feels a foot, but be sure it is a foot, and don't pull a hand down instead. Grasp one or both feet firmly, I seldom ever hunt for the second foot, the head is already pushed up out of the way to allow the hand to enter the uterus. With his free hand the operator pushes the head to the side of the uterus corresponding to the child's back, or better have an assistant grasp the head externally, and while he makes traction, the assistant helps turn the child. The operator retaining his hold on the foot or feet, gradually without undue force, withdraws his hand from the uterus. The assistant now makes some pressure on the fundus of the uterus, by light traction the hips are delivered, then the arms; but right here look out sometimes the arms become extended above the head and are difficult to dislodge; right here is where I got my two fractures, but by care and patience it can usually be done without much difficulty. Keep the baby's belly down or you may get another occipito-posterior position, with the body outside the vulva. The baby's body is wrapped in sterile towels and the body carried up over the mother's abdomen, slight pressure over the fundus, and the baby's face appears at the vulva, the chin, mouth, nose in the order named. A nurse gently wipes the baby's face and it usually gasps. We can now take our time to deliver the head over the perineum as the baby can breathe and is in no danger even if the cord is compressed. The head is slowly delivered over the perineum and usually a lusty squall announces the fact that the operation is over and the population increased by one. Sounds easy doesn't it?

Immediately upon delivery of the head the nurse gives a half c.c. of pituitary extract to stimulate the uterus to contraction to prevent hemorrhage and hasten the third stage. Upon the completion of the third stage one c.c. of ergot is given, any lacerations repaired and the patient moved to a warm bed.

Conclusions: That occipito-posterior occurs more often than most writers suggest, and that many of them will not

rotate, but demand surgical interference in the interest of both mother and child. That pelvic and foetal measurements are necessary to an intelligent handling of cases of dystocia from any malpresentation of foetus. That it is a mistake to allow these cases to go into exhaustion before interference, in hopes that they will rotate and be expelled spontaneously.

That practically all the accidents as sepsis, ruptured uterus, and injured babies are in neglected cases.

That version under surgical anesthesia is the safest and most rational procedure when there are no direct contra-indications.

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### TUBERCULOSIS ABSTRACTS

No more hopeful ray of sunshine has ever come to illumine the dark kingdoms of disease than that introduced into the path of the consumptive through the discovery of artificial pneumothorax. Recommended on theoretical grounds nearly a century ago, so soon, indeed, as the elasticity of the lung was first clearly recognized, first practiced some sixty years later, but again forgotten, it is only during the present decade that it is reaching that place of supreme importance in phthisis-therapy which is undoubtedly its due.—Clive Riviere.

#### Artificial Pneumothorax

Artificial pneumothorax is a surgical procedure whereby an inert gas is injected into the pleural cavity. This causes the lung to collapse, since normally the pleural cavity is merely a potential one with negative atmospheric pressure. When there are severe or extensive tuberculous lesions of the lung which fail to respond to the usual methods of treatment, artificial pneumothorax has proved its value. Collapse puts the lung at rest, retards the growth of tubercle bacilli and stimulates the rapid growth of fibrous tissue. It is especially indicated when the disease is limited to one side and when the condition has failed to respond to the usual methods of treatment. If not more than one-half of one lobe of the good lung is involved, collapse of the worst lung is in-



dicated. In recurring pulmonary hemorrhage, the induction of artificial pneumothorax is a God-send. The procedure is often of value in pulmonary abscess and in uni-lateral bronchiectasis.

The apparatus for collapsing the lung consists essentially of two glass jars, a manometer, a large calibrated needle and the necessary tubing. The puncture is commonly made after novocaine anesthesia, at about the level of the fifth to seventh interspaces in the mid-axillary, or anterior axillary, line. When the needle has entered the pleural cavity, the tube is attached to the manometer, which should register a distinctly negative pressure with oscillations corresponding to the respirations. A very small quantity (10-15 cc.) of gas is allowed to flow into the pleural cavity. This is repeated every minute or so, meantime watching the manometer, until the patient has received a total of 150-250 cc. The needle is then withdrawn and the wound sealed with colodion. Two or three days later, a refill of gas is given. Complete collapse should usually extend over a period of some three to five years, depending on the rate of healing of the lesions. —Modern Aspects of the Diagnosis and Treatment of Tuberculosis, J. A. Myers.

following artificial pneumothorax.—  
Courtesy J. A. Myers.

### Results of Artificial Pneumothorax

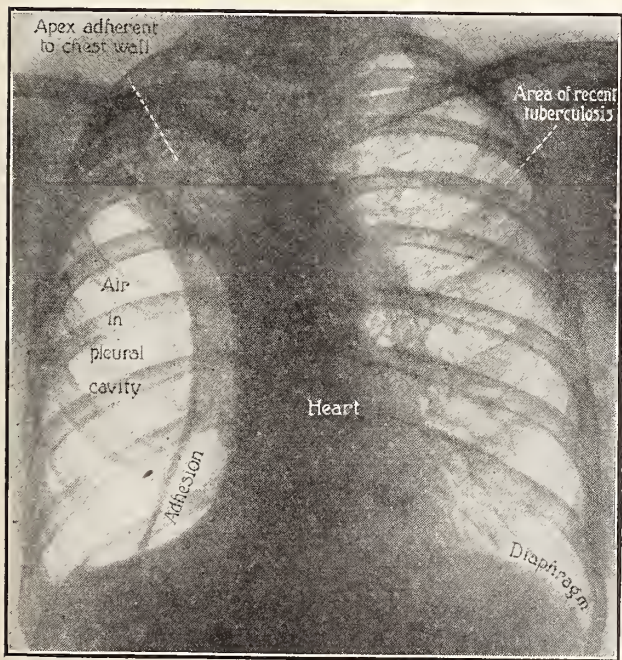
Peters reports as of July 1, 1925, a series of 273 patients at the Loomis Sanatorium, in whom therapeutic pneumothorax was administered or attempted during the years 1911-1923 and carefully followed up thereafter. Cases were divided for purposes of study into three groups; i.e. satisfactory collapse, incompletely effective collapse, temporary or undetermined collapse.

In the earlier group (1911-1917) unfavorable cases predominated and a satisfactory collapse was less often secured. From 1918 on, about three times as many patients as formerly have received this treatment and for longer periods.

At least 85 per cent of cases had far-advanced disease. Thirty-two per cent were "desperate last resort" cases. Classified according to clinical type or course, about 10 per cent were of acute phthisis, 30 per cent of very chronic forms, and 60 per cent intermediate, subacute or subchronic. Almost all could be regarded as clinically active, and all had symptoms or disability of some sort, dependent on their tuberculosis.

About 33 per cent of all cases in whom this procedure was attempted obtained a satisfactory or effective collapse of the diseased lung. In about 20 per cent, it was found impossible to induce any pneumothorax whatsoever. In the remainder, or 46 per cent, various degrees of collapse, more or less effective or temporary, were obtained. Extremely chronic cases and "desperate last resort" cases are unlikely to obtain a satisfactory collapse. On the average, the shorter the duration of symptoms, the more likely is an effective collapse to occur, but exceptions happen frequently. Very acute cases are more likely to be associated with extensive pleuritic adhesions than the less acute types.

Among the various reasons for discontinuing pneumothorax, obliterative adhesions with contraction of the pleural space played an important role, also unsatisfactory clinical response, due in most cases to an ineffective or incom-



From x-ray plate showing extensive tuberculosis of right lung and collapse



pletely effective collapse. Progression or exacerbation of disease in the contralateral lung was a somewhat less frequent reason than the foregoing for the cessation of treatment, assuming great importance in the "desperate last resort" cases and in the group of acute phthisis.

Pleuritic complications were encountered in at least half of those treated by pneumothorax, serious pleurisies being most common. The more serious complications were most frequently associated with the more serious types of disease and those in which pathological conditions prevented a satisfactory collapse.

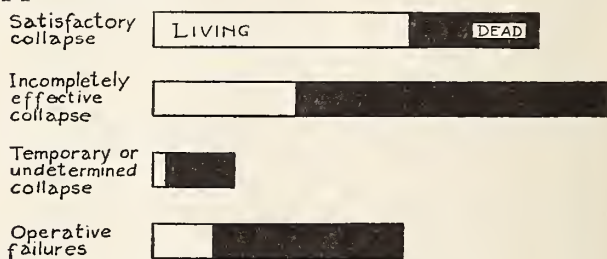
Of other important complications developing during or after the course of treatment, intestinal were most frequently noted; in about 4 per cent. Tuberculosis meningitis occurred in over 4 per cent of the "satisfactory collapse" group, being, of course, fatal. There were no cases of gas embolism nor serious "pleural reflex" or shock.

Progression or exacerbation of disease in the contralateral lung has been recorded in about 25 per cent of cases under pneumothorax, and improvement in about 7 per cent, leaving about two-thirds *in statu quo*. Among the "satisfactory collapse" group alone, more showed improvement in the contralateral lung than the reverse.

The results obtained vary greatly with certain factors, most important of which is the obtaining and maintaining of a satisfactory collapse of the diseased areas for a sufficient period of time. The striking effect of a satisfactory pneumothorax in bringing about the disappearance of tubercle bacilli from the sputum commands attention. The proportion of apparently durable end-results appears to bear a very close relation to the permanent disappearance of tubercle bacilli from the sputum.

Of all patients in whom any pneumothorax at all was induced, 42 per cent were living at the end of two to fourteen years, and 24 per cent were reported in satisfactory condition. Of the group with satisfactory collapse, 61 per cent were living, and 45 per cent were reported in satisfactory condition. The

end-results in the pneumothorax group were nearly twice as good as when no pneumothorax was possible. Actually, the "satisfactory collapse" group accounts for most of the difference: when a satisfactory collapse was obtained, the chances of being alive and in satisfactory condition after two to fourteen years were almost trebled, and the chances of being in satisfactory condition exactly trebled.—Artificial Pneumothorax at the Loomis Sanatorium over Fourteen Years, Andrew Peters, American Review of Tuberculosis, Vol. XVII, April, 1928. pp. 348-373.



Status of 257 patients on July 1, 1925, treated by artificial pneumothorax from 1911 to 1923 at Loomis Sanatorium.

White, living; Black, dead.

"All in all, artificial pneumothorax represents by far the greatest advance yet made in the special treatment of pulmonary tuberculosis."—Allen K. Krause.

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## KANSAS MEDICAL LABORATORY ASSOCIATION

### Laboratory Examination in Early Syphilis

J. D. KABLER

Director Wichita Clinical Laboratory, Wichita Hospital Clinic

You will have in the course of your daily practice many patients coming to you with an ulceration or abrasion on the genitals in which they have begun to show a proper amount of concern. Each will no doubt have a history of an insect bite, hair cut, or other equally innocent explanation. Very few will admit that they have had sexual intercourse within the past several months. As a rule the value of the history in a case of primary syphilitic infection is grossly exaggerated to say the least. I have found in checking over several hundred of these cases by darkfield and Wassermann



that the most innocent appearing of these lesions may be the most dangerous.

There are several types of infection that we find rather often upon the genital organs; chief among these are chancre, chancroid, herpes and occasionally perhaps, granuloma inguinalae. The latter I have never seen in my work here and it seems to be largely confined to the tropical regions and the industrial centers of the East. The lesion we are most interested in is the chancre, because of its future rather than its present, and the dire results to the patient and his family. And with all due respect to the ability and experience of the physician, I would like to say that it is impossible to make a correct diagnosis in any respectable percentage of cases by merely making a gross or macroscopical examination of the lesion. The more of these you see, the less certain you will be as to which they are. I have found too many lesions teeming with *treponema pallida* that macroscopically appeared to be only a scratch or hair cut covered with a healthy scab.

The old idea that a chancre must be approximately round, raised, indurated and with an advancing ulceration under the skin is wrong in a large majority of the cases. The following case is cited as an example. Mr. X came to the physician's office with what was apparently a clean cut with a healthy scab on the shaft of the penis. The lesion was perhaps 15 mm. long by 1 mm. in width and had none of the classical attributes of a chancre except that it had not healed perceptibly in 10 days' time. No treatment of any kind had been used and the lesion was in excellent condition for a microscopical examination. The scab was lifted with a sterile loop and darkfield examination of the serum from the lesion was made. *Treponema pallida* were found in large numbers and the diagnosis of syphilis was made. The lesion healed rapidly after the first treatment with salvarsan. The blood was checked by Wassermann at that time and found negative. It was also checked at intervals for about two years and was always negative.

Likewise, the idea that multiple lesions exclude chancre is wrong. In one case

that was sent to our office we found three large lesions at the base of the shaft. Darkfield examination showed the presence of many *treponema pallida* in each lesion. Stained smears from them were negative for Ducrey's bacillus. As this was an out of town patient I did not follow the case up with a Wassermann. However, I do know that the lesions began to heal immediately after the first injection of salvarsan.

Dr. B. referred to us a case with seven separate and distinct lesions on the skin and mucous membrane of the penis. In making our examination of these we touched each lightly with a sterile cotton swab and all except one bled rather freely. This one was to all appearances identical with the others except for the bleeding. We examined the serum from this lesion and found many spirochetes and the scrapings from two of the others failed to show them. However, the stained smear from the others showed the presence of many Ducrey's bacilli. The blood at the time was negative by Wassermann. Had not a darkfield been done in this case both patient and doctor would have believed there was only a chancroid infection and the case would have gone on to the secondary stage, when the time and cost for treatment would have been much greater and the chance of complete cure would have been very much lessened.

We could recite many more cases of this kind in which the character of the lesion was so well masked either by its own appearance, location, or by other lesions that it might have been very easily passed as being non-syphilitic. Likewise we find urethral chancres that might easily have been overlooked and no doubt a large percentage of them are overlooked, especially when they accompany a case of gonorrhea. Any discharge from the urethra that does not show an abundance of gonococci or other pyogenic bacteria that will account for the discharge should be subjected to examination by darkfield. Or in a case of gonorrhea, when a serous discharge persists after the purulent discharge has been stopped, it is well to be suspicious and examine for *treponema pallida*. This is the beginning of many cases of syph-

ilis that later give a negative history in regard to a primary sore.

Here I would like to call attention to the harm which may be done the patient by the local application of calomel ointment, mercurochrome, or caustics. I have found in my work that one or two applications of calomel are sufficient to drive the organisms so deep into the tissues that a darkfield examination is worthless. I have almost reached the place where I refuse to do a darkfield if the lesions have been so treated. In these cases it is sometimes possible to obtain a specimen from the lymph glands by injection of normal saline and removal by hypodermic and making a darkfield of this material. But often the patient will not submit to the pain and inconvenience of such an examination. And furthermore we do not get an enlargement of the glands in all cases. In one case, at least, which has come under my observation within the past two months two applications of mercurochrome had produced the same results as would calomel; that is, driven the organisms too deep for microscopical examination. When the lesions are so treated there is nothing to do but wait several days during which time the lesion is washed with sterile saline or water twice each day, when the darkfield can again be used. By that time the Wassermann is perhaps a weak positive and the patient has lost the benefit of an early diagnosis. In my experience in checking bloods on syphilitics for the past ten or eleven years, and I believe that most of the authorities will bear me out in the statement, the possibility of complete eradication and cure of syphilis is close to 100 per cent if taken before the blood is positive and perhaps less than 50 per cent if taken after we are able to demonstrate a positive Wassermann, and that includes the cases where the Wassermann is obtained in the late primaries and very early secondaries.

I hope you will pardon a few lines here on the treatment of these very early cases. Our latest authorities insist that if you are going to attempt an abortive treatment on these cases before the blood has become positive, you should use heroic measures. That, if in spite of

treatment you may give, the case should develop a positive Wassermann you will find that subsequent possibility of cure is very much lessened. You are in danger of producing an "arsenic fast" or "Wassermann fast" condition in which the *treponema pallida* have developed an immunity or tolerance for arsenic and your patient's condition is worse than before. They claim, and I find by blood examinations the same to be true in my experience, that a case of this type is much harder to obtain results with than one who has developed secondaries before the case is recognized and treated.

In the early part of these remarks I mentioned chancroids, herpes, granuloma inguinalae as well as insect bites and other abrasions which are occasionally authentic. Herpes as a rule is characteristic enough to be fairly safe in diagnosis. Granuloma inguinalae, as far as my experience is concerned, is non-existent here at the present time, but has been found in a few cases in the industrial centers of the East. It is more extensive and rapidly progressive than any of the other lesions mentioned and will include a part or all of the inguinal regions.

Chancroids or soft chancres as they are called are theoretically just that, actually they may be vastly different. I have seen chancroids that were hard, indurated, circumscribed, and bore all the characteristics of the classical chancre. Upon examination no *treponema pallida* were found, but Ducrey's bacilli were present in large numbers. In cases of this kind we make repeated darkfields to eliminate any chance of error. These cases are checked by Wassermann for several months and the blood remaining negative, proves there was no syphilitic infection. The point I am trying to stress here is that you cannot tell from gross or macroscopical examination a chancre from a chancroid and the use of caustics will so affect the lesion that it precludes all opportunity of successful laboratory examination.

I have referred altogether to lesions of the male genitals for two reasons, one of which is that in our work we see comparatively few female patients. The lesions of the female are often so lo-



cated that they escape the patient's notice entirely, hence no medical examination is made. Also I am of the belief that there are more infections in males than in females as promiscuity is more prevalent in the male of the species.

I would like to call attention here to the less common cases of chancre of the lip and tonsils. Within the past few years I have had the opportunity of observing perhaps ten or twelve cases of lip chancre. One of these was traced directly to two men using the same pipe for smoking. Some of the others were traced directly to kissing of infected persons and the others were indefinite. Within the same time I have seen some five or six cases primary in the tonsils. These were first treated for septic sore throat and then for Vincent's and finally checked with a Wassermann and found to be specific. One of these cases at least had been treated for some time for malignancy. In practically all of these cases, both lip and tonsil, the nature of the infection was not determined until the patient had begun to develop secondaries. Had they had the benefit of a darkfield examination early they would have saved much time and expense in treatment and the prognosis would have been much more favorable, besides removing the danger of infection to innocent friends and relatives.

I have referred mostly to darkfield examinations and stained smears because we are talking of early cases, and by early cases I mean those that are not more than two weeks old. I have made it a practice in my laboratory to recommend that the patient submit to a Wassermann at the same time that the darkfield is made and this is because I have found that many times when we get repeated negative darkfields due to local treatment of the lesion, even when the lesion is less than two weeks old, we are able to get a weekly positive blood test, perhaps a negative water bath but a three or four plus ice box test. I have one case in mind that I saw about two months ago. The patient noticed a small sore on the foreskin and went to a physician in one of the cities in the western part of our state. He was given local

treatment of calomel powder a couple of times and sent to a laboratory in another city for examination. Report of examination was as follows: Darkfield—negative. Smears for Ducrey's bacillus—negative. Wright's stain for inclusion bodies of granuloma inguinalae—suspicious but not definitely positive. Two or three days later he came to a physician in our city and was sent to me for further laboratory examination. My results were as follows: Darkfield—negative. Smears for Ducrey's—negative. Wright's stain for granuloma inguinalae—negative. I asked the patient to bathe the lesion in warm salt or tap water and to return the next day for rechecks on the various examinations. The same examinations were made and all were negative. By this time the lesion was about two weeks old and I asked permission to do a Wassermann with the following results: water bath 2 plus and ice box 4 plus positive. This definitely established the nature of the infection and the diagnosis was confirmed by the rapid healing of the lesion after one injection of salvarsan.

I might go on and recite more cases of the same kind, but I believe that these will illustrate the various points I want to emphasize. I could go further and tell how the laboratory might help in secondaries, the most easily recognized phase of the disease, and in the tertiary and latent stages, but I will confine myself to the primary stage only.

In closing there are a few points I wish to stress. Do not use local treatment on any lesion that is at all suspicious, and I would almost go so far as to say that any lesion on the genitals is suspicious until after you have had a thorough microscopical examination made. Do not think you can tell chancres from chancroids by macroscopical examination only. Insist to the patient that one or more negative darkfields are not definite evidence of the absence of *treponema pallida* and that all darkfields should be checked with a Wassermann to corroborate a negative and to aid in the prognosis of the case if positive in the darkfield. Those of us in the laboratory service are anxious to give a maxi-

mum of service and with co-operation we feel that we can be of great aid to the physician in establishing early the nature of the infection and that the time and expense of competent laboratory examinations are returned many fold in the lessening of the time required for the cure of the patient.

—————R—————

### **Intramuscular Use of Convalescent Serum in Treatment of Polimyelitis**

Convalescent serum administered intramuscularly is of distinct value in the treatment of poliomyelitis. The effectiveness of such treatment depends on early diagnosis and treatment, with sufficiently large, and if necessary, repeated doses of potent serum. The method, on account of its ease, safety and simplicity, may be applied in the doubtful case without waiting for confirmatory evidence, and is particularly apt to provide treatment in the early stages when much may be expected as a result of treatment. It is extremely desirable that stores of pooled convalescent serum be made available for general use and particularly that such stores be on hand prior to the outbreaks of actual epidemics. E. B. Shaw and H. E. Thelander, San Francisco (J.A.M.A., June 16, 1928), based their report on a series of eighty-one patients, of whom forty-three received convalescent serum intramuscularly during the active stage of the disease. The data in these forty-three treated cases, arranged with regard to the time which had elapsed before serum was administered, are: In seventeen cases that were treated from one to forty-eight hours after the onset of symptoms, with a total of two (bulbar) paralyses at the time of treatment, there were no persistent paralyses and no deaths; in six, treated from forty-eight to seventy-two hours after onset of symptoms, with a total of five paralyses at time of treatment, there were three persistent paralyses and one death; in ten, treated from seventy-two to ninety-six hours after onset of symptoms, with seven paralyses at time of treatment, there were three persistent paralyses and two deaths; and in ten, treated late (after five days), with a total of ten

paralyses at time of treatment, there were seven persistent paralyses and two deaths, while in the thirty-eight cases not treated, thirty-three showed residual persistent paralyses and there were three deaths.

—————R—————

### **Acne From Iodized Salt**

A total of seven cases of acne of the face, all in women past the "acne age," have been observed by Bedford Schelmire, Dallas, Texas (J.A.M., June 9, 1928), following the prolonged use of iodized salt. The duration of the period of ingestion of the salt in these cases ranged from six weeks to one year. Since doses as small as 3 grains (0.2 Gm.) of the iodides have been known to produce alarming systemic symptoms, it is not beyond the scope of speculation to presume that this so-called harmless iodized salt was the sole cause of the acneform eruption in these patients. In not a single instance was the salt prescribed by a physician. One patient had suddenly developed a moderately severe pustular acne at the age of 30. In view of her age and the absence of comedones, she was questioned concerning the ingestion of drugs. There was no history of the ingestion of bromides or iodides, but the patient volunteered the information that she had used iodized salt exclusively for several months. This was not considered an etiologic factor at the time. The routine acne treatment and irradiation with the roentgen ray resulted in a cure in about six weeks. One year later, this patient returned with a recurrence of the acneform eruption. Questioning elicited that she had eliminated iodized salt from her diet shortly after her initial visit for acne treatments two years before. Complete disappearance of the acne eruption followed in about six weeks. One year later, iodized salt was again added to the diet. After she had used this salt for a period of six weeks, the acneform eruption of the face reappeared, this time in a more pronounced form. Elimination of the iodized salt from the diet again resulted in a rapid and, to date, complete cure. Removal of this element from the diet of four other patients resulted in prompt and absolute cure.



# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - Editor**

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### ATTITUDES

Two of the papers that were read at the last annual meeting of the Society, dealing with medical economics, are printed in this number of the Journal.

In both of these papers practically the same problems are projected, but from different view points. In one the relationship between the medical profession, public health units, and voluntary health agencies is presented by one who is closely identified with one of the latter agencies; in the other by one whose point of view is that of the general practitioner.

There is no argument about the purposes or accomplishments of the public health units; it is agreed that each of the various voluntary health agencies has found a field in which it may carry on with more or less justification for its existence; and of course there is no disagreement about the part played by the medical profession in the operation of all of them. From the viewpoint of one of them, however, the performance of this part by the medical profession is a

duty or an obligation, while from the other viewpoint it is a charitable concession.

But whether it was an obligation or a concession it has become an established precedent, a precedent which the voluntary health agencies will not, and the medical profession dare not ignore.

In practically all discussions on this subject it is conceded that doctors should and do willingly donate their services to those who are unable to pay, but there is also always the reservation that there is no obligation about it. Thus we attempt to save our pride and we delude ourselves with a show of independence we no longer possess. The potential resources of medicine are already being directed and controlled by influences outside of our profession, by government agencies, foundations, commercial enterprises and numerous volunteer guardians of humanity. The medical profession, however, is responsible for the situation that now exists, for it invited these interventions. The medical profession was instrumental in, and responsible for, the creation of the public health service and, although the scope of its activities has extended far beyond the early conceptions of those who were most active in the efforts that brought it about, there are no apologies to offer. The medical profession is responsible for the existence of free clinics. Formerly, the majority of these were conducted for educational purposes. There is some question if these could in any sense be regarded as charities, since the patients who attended them submitted themselves for examination and discussion in exchange for such medical services as they received from the students and members of the faculties, which was really not an unfair exchange. There was a rule, however, more or less rigidly enforced, limiting the admission of patients to those

who were unable to pay for medical services. This rule was essential because of probable opposition of other members of the profession, and because those who served in the clinics did not care to reduce their own sources of income. There was a semblance of charity, however, and upon this and the fact that the cities and counties were relieved of a part of their burden in caring for the sick poor these were frequently appealed to for contributions to the support of the clinic. This semblance of charity was the basis upon which various charitable organizations were enlisted in the support of the clinic and in giving publicity to its work.

When the demand for educational clinics was considerable narrowed by the standardization of medical schools, it did not appear to the former instructors in the defunct schools that they should or could continue these clinics as real charities. In fact the idea of charity did not seem to be as strong an argument with these men as it had been with the lay organizations. However, the city and county governing bodies had found their contributions to these clinics to be a profitable investment and the lay organizations had found in them a satisfactory vent for their charitable impulses. It should not have been unexpected that these agencies would re-establish free clinics wherever it was possible to do so, that they would assume the direction and control of them, and that they would ask and expect the medical profession to contribute their services. These agencies, however, have not limited their activities to free clinics, they found opportunities for a more diversified service and a broader field for the display of paternal relations to both the sick and the well. Not particularly concerned with the interest of the medical profession they find no reason to restrict their efforts or their services to

the indigent classes except where the medical organizations are strong enough and active enough to refuse co-operation under other conditions. It is not unlikely that even the educational clinics, as these become more and more controlled by full time instructors, will find less and less reason to examine closely into the financial status of those applying for treatment.

Our problem is a real one and a serious one, but if it is to find some way by which we can continue to co-operate with all of these agencies and still conserve our legitimate sources of income, its solution is impossible. The encroachment of the carelessly conducted free clinic upon the private practices of even a considerable number of practitioners is insignificant when compared to the total loss resulting from the nearly complete eradication of contagious diseases.

The medical profession has and must continue to co-operate with the public health units without regard to what it may cost us. That part of our problem has already been solved, for the ultimate goal of medicine is the ultimate prevention of disease of all kinds.

It is poor policy, however, to starve the team before the crop is made. Doctors must have an income that will enable them to be progressive. Besides enough to live on, they must have the proper equipment and time and facilities for study, and a reasonable return on the considerable investment they have made in preparing themselves for this work. Otherwise the study of medicine must lose its attraction for those who will do credit to the profession. At the present time the net income of any skilled laborer exceeds that of the average general practitioner, and he has little or no investment.

But these skilled laborers are organized and they work together for the in-



terests of all. The present wage scales and the limitation of working hours could never have been brought about by individuals effort. The medical profession is organized into scientific societies and, although some efforts have been made to interest these societies in the economic affairs of the profession, these efforts have so far resulted only in the adoption of resolutions and the appointment of investigating committees. It is doubtful if a scientific society can be made to function in any other capacity. It is doubtful if it has the background to insure effective co-operation, or if its membership can be made sufficiently permanent to have any influence.

There is little unanimity in our profession. Fraternity, interpreted by the attitude of medical men toward each other, consists in letting the other fellow alone.

There are a good many who have not yet felt the gradually increasing encroachment upon the business of practicing medicine. Particularly is this true of the surgeons, the specialists, the popular internists and consultants, who have all they can do; then there are those whose isolation provides a fair degree of immunity. However the surgeons and some of the specialists are beginning to feel the effects of workmen's compensation laws and, as the general practitioners find it more and more necessary to conserve their own sources of income, there will be fewer referred cases for any of them.

When all of us begin to appreciate the pinching process we will be ready to do something; or at any rate, we will wonder why somebody doesn't do something. By that time it will be too late to do anything but submit, as we have always submitted.

In the June number of the Journal reference was made to the five-year program of a committee of forty-two in the

study of the cost of medical care, and the following prediction was made: "The findings of this committee, no matter what they are, will be of considerable interest to the medical profession. Although fourteen of the forty-two members of the committee are presumably engaged in private practice it is a safe prediction that the independence of the private practitioner will be involved in any solution of the problem of the high cost of medical care that is offered."

The finding of this committee must be that the cost of medical care is too great, and will probably be that this cost should be more evenly distributed. And it is conceivable that when this report is published it will be the justification for the launching of various commercial enterprises prepared to furnish medical care on a per capita assessment plan, the assessments being based on the figures determined during the five-year study of this committee.

We have already, in Kansas, an insurance company which for a small monthly payment furnishes its members with hospital care and with surgical and medical treatment. Several medical men are employed and the hospital is well equipped. Doctors in various parts of the state have lost good paying patients to this hospital, but it is not unethical according to the decision of the medical society where it is located.

There are great possibilities in enterprises of this kind and when the average per capita cost for medical care has been worked out, so that a safe basic rate can be fixed, there will be numerous other insurance companies offering to furnish the public with medical care on a capitation plan. The only condition that might prevent such a development would be a complete and cohesive organization of the medical profession on a fraternal, beneficial and protective platform.

Our attitude toward these commercial health associations is perplexing. If a half dozen doctors should organize an association and agree to furnish the members with medical care on a per capita assessment plan, they would be regarded as extremely unethical; but if a number of business men form an organization on the same plan and employ these doctors at a stated salary to do the work it is quite ethical. The fact that doctors can be so employed makes it possible for such an association to operate. In other words it is more ethical to be the hired man than one of the stockholders in such an enterprise.

We should be prepared for whatever may develop along this line, we should fix a minimum salary for those of our profession who may be employed by these commercial associations or we should be prepared to conduct them on our own account. But to do this necessitates a stronger organization than we now have.

There is another part of our problem that is unsolved and that has to do with our attitude toward the voluntary health agencies. Shall we continue to co-operate with them by donating our services or shall we adopt the plan of the various merchants with whom they also do business, make our contributions in cash and charge reasonable fees for the services we render? This will not be determined by individual action or individual effort, it will require mass action and mass action can only be secured from a strongly organized body of men.

—R—

#### Concerning Orthopedic Clinics

The following communication from Dr. Wahl, Dean of the Medical School, explains itself.

Editor of the Journal,  
Kansas Medical Society  
Topeka, Kansas.

Dear Editor:

There has been considerable objection to the Medical School carrying on the orthopedic clinics over the state. I have been considerably surprised at this objection because the clinics were established only following a written communication from the representatives of the local medical societies requesting such clinics to be held. I am enclosing a copy of a letter which I am sending to the societies concerned and I would appreciate it if you would publish this letter in the State Medical Journal.

We have no desire to antagonize the medical profession and if this is the real consensus of opinion, we naturally shall want to change our policy in regard to them.

Very sincerely yours,

H. R. WAHL, M.D.  
Dean.

August 1, 1928.

Dr. C. A. Boyd, Secretary,  
Reno County Medical Society,  
Hutchinson, Kansas.

Dear Dr. Boyd:

Inasmuch as the State Medical Society in its annual meeting of May 10 passed a resolution condemning the Medical School for holding orthopedic clinics over the state, the Medical School is requesting a definite stand from the local medical organization at whose request these clinics were organized, and with whose co-operation they were carried on. It should be recalled that in no case was such a clinic organized until the School was requested by the local medical organization, in writing, to do so.

Inasmuch as medical representatives of these communities where the clinics were held were present at the meeting of the State Medical Society and made no objection to the above resolution, the School assumes that these clinics are no longer desired and is planning on discontinuing them after October 1.

It should be borne in mind that one of the main ideas in establishing these clinics was to have the local medical profession control and supervise this type of charity work, all local details being placed entirely in their hands. The discontinuance of these clinics may be fol-



lowed by the establishment of similar clinics by lay organizations, without the local profession having any word in their control or management.

The only condition under which these clinics will be continued next year is the unquestioned support of the local profession and the assurance that their representatives will take the matter up at the next meeting of the State Medical Society, give their reasons for supporting such clinics and request the Society to rescind this resolution. Unless the Medical School has this assurance by October 1, the clinics will be discontinued as soon after this time as satisfactory adjustments can be made.

Very sincerely yours,  
H. R. WAHL, M.D.  
Dean.

HRW:FI

—————R—————

### CHIPS

Fink, from a study of diabetes insipidus, *Archives of Pathology, July*, concludes that it is a clinical syndrome without a uniform pathologic basis. Experimental polyuria has been produced by lesions in various parts of the brain. Every part of the base of the brain has been implicated at one time or another. However, when polyuria develops in a case of malignancy, it is almost a pathologic sign of a metastasis in the posterior lobe of the hypophysis. The hypophysis and the centers in the midbrain must be considered as a functionally united system. Injury to any part of this system may result in diabetes insipidus, although it does not invariably do so. Function of the kidney is probably under the influence of three factors: the kidney itself and its autonomic nerves; a vegetative center, probably located in the tuber cinereum, and a pituitary hormone.

Rentschler suggests that many cases of gouty arthritis are overlooked because the characteristic tophi are not present, *Medical Clinics of North America, May '28*. In his opinion an absolute diagnosis of gout may be made when there is a history of arthritis with definite and complete remissions and when there is an elevation of blood uric acid

whether tophi are present or not. The roentgenologic appearance is not characteristic. Punched out areas have been regarded as evidence of gout but there may be similar small areas in infectious arthritis. Early in the disease there may be only periarticular changes with deposits of urates in the soft tissues; later hypertrophic as well as destructive changes appear.

Naish, in *London Lancet*, July 7, describes a new type of pathological consolidation of the lung and terms it 'rheumatic lung.' It is usually associated with evidences of active rheumatism elsewhere, especially in the heart. Its most striking feature is an enormous endothelial proliferation, the cells apparently originating from the walls of the alveolar capillaries. The consolidation may spread through the lungs with great rapidity. There is very little respiratory distress or disturbance of respiratory rate until the consolidation is enormous. If salicylate of soda is given there is little or no fever. He believes that this type of consolidation accounts for the patches of dullness found at the left base in cases of rheumatic carditis.

Syphilis is generally a tertiary manifestation when it involves the stomach, is the opinion of Irving Gray, *Medical Clinics of North America, January*. The characteristic histological changes are usually: (1) Extensive involvement of the blood vessels with vascular infiltrations and distinct endarteritis and endophlebitis. (2) Marked infiltration of mucosa by plasma and lymphoid cells. (3) The presence of gummata varying in size, or occasionally single, which may or may not ulcerate. The onset of gastric symptoms in an individual about forty, with clinical evidences of carcinoma, serological evidences of syphilis, and roentgen evidences of definite anatomic changes in the stomach, should call primarily for antiluetic treatment before submitting the patient to an operation.

From a study of the various methods of treatment of paresis, Williford, *Medical Clinics of North America, March*, finds that 20 per cent of paretics treated by the malaria-inoculation method show

complete remissions, with Sodaku, 22 per cent of complete remissions have been reported, while the tryparsamid-with-mercury-salicylate method yields 41 per cent of clinical remissions. The death rate from the use of malaria-inoculation is 10 per cent, from Sodaku it is about 3 per cent, while tryparsamid offers no disadvantages except amblyopia which occurs in about 10 per cent, and disappears without harmful effects. He thinks tryparsamid is by far the best drug to use in general practice.

Vipond, *American Medicine*, July, suggests the importance of the orbital systolic murmur. This is detected by placing the stethoscope over the closed eye. It may be heard as a rule in cases of myocarditis and in all conditions where the myocardium is involved. It may be detected before other murmurs in acute endocarditis. He finds it of value in distinguishing between aortic and pulmonary systolic murmurs as it never occurs with the latter. The orbital murmur is accentuated by exercise.

According to the reports of various extensive radiologic examinations and necropsy finding it has been estimated that one in every eight persons over forty-five years old shows diverticular formation in the large bowel. It is also found twice as often in men as in women.

—R—

## SOCIETIES

### DICKINSON COUNTY SOCIETY

The Dickinson County Medical Society met at the Hotel Potter, Hope, Kansas, July 27. Dr. Abram Blesh of Oklahoma City read a paper on "Goiter." Several clinical cases were presented by Dr. Turner of Hope. Dr. Theodore Kresh made report of the State Convention. The basic science law was discussed, and the family physicians of the candidates for the legislature were asked to interview them concerning the law. A weakness of the draft of the law was pointed out in that the chiropractor and osteopath had a limited training yet had equal rights before the law. It was suggested that a section be added to limit them to their respective licenses or to amend the medical practice act so

that only those licensed to practice medicine and surgery could do so.

Mr. John Hamilton was indorsed for governor and Dr. Graybill for lieutenant-governor.

The next meeting will be in Abilene, Kansas.

DANIEL PETERSON, M.D., Secretary.

### THE NORTON-DECATUR MEDICAL SOCIETY

A regular meeting of the Norton-Decatur Medical Society was held at the Commercial Club rooms at Norton, Kansas, July 18, 2:30 p. m. The meeting was called to order by the president. The minutes of the last meeting were read and approved.

The application of Walter E. Reckling of Lenora was presented and accepted.

The resignation of Dr. J. Jeurink of Prairie View was presented and upon motion by Ivan B. Parker of Hill City was accepted.

The following papers were read and discussed: "Non-specific Protein Therapy in the Treatment of Vincent's Angina"—Walter E. Reckling, M.D., Lenora. "Tuberculosis and the General Practitioner"—S. L. Cox, M.D., Sanatorium. "Abortions and their Treatment"—M. J. Renner, M.D., Goodland.

Number present, 18. Meeting adjourned at 6 o'clock to meet with the Auxiliary at the Hotel Kent for dinner.

W. STEPHENSON, Secretary.

—R—

## DEATHS

Elliott W. Gordon, Edwardsville, aged 71, died June 12 of hypostatic pneumonia. He graduated from the College of Physicians and Surgeons, Kansas City, in 1895.

Ezra Edmund Brewer, Beloit, aged 68, died June 15 of pernicious anemia. He graduated from the University Medical College, Kansas City, Mo., in 1892. He was for many years on the Board of Education. He was a member of the Society.

William Elwood Bundy, Hugoton, aged 76, died June 20 of lobar pneumonia. He was licensed in 1901.

A. Marion Dick, Zenda, aged 56, died April 19 of mitral stenosis. He graduated



ed from The Louisville and Hospital Medical College in 1908. He was a member of the Society.

Olin W. Baird, Marquette, aged 76, died May 8 of uremia. He was licensed in 1881.

...

Robert A. Leith, Irving, aged 62, died March 24, at Pasadena, California, of heart disease. He graduated from the Medical Department of the University of the City of New York in 1894.

Martin Orrin Peters, Scandia, aged 54, died February 11 of chronic nephritis and myocarditis. He graduated from the Kansas City Hahneman Medical College in 1909.

—R—

### A Happy Combination

The aim in scientific medication has always been to combine the highest degree of efficiency with the lowest degree of risk—for it is almost a truism in medicine that any drug powerful enough to do good may also, if indiscreetly used, do harm. Thanks to the research work that is so intensively carried on by our best pharmaceutical manufacturers, the element of danger is being reduced without impairing the element of efficiency; and this applies to both chemical and biological products—iodine, mercury, the salicylates, antitoxins, antigens, etc.

One of the most striking examples of this class of work is the separation of the virulence of rabic brain tissue from its antigenic activity. By the method of Dr. Cumming (dialysis) a Rabies Vaccine is offered by Parke, Davis & Co. which cannot possibly infect the patient with rabies, but which is claimed to be much more efficient as a prophylactic, after the bite of a mad dog, than the original Pasteur vaccine.

—R—

### Annual Fall Clinics

The subject matter at the vast majority of the larger medical meetings is of such a character as to be of little if any benefit to the general practitioner. He is unable to digest the vast array of statistical data and laboratory investigations that must find place in an ultra-scientific paper. Later, at his leisure, it is possible for him to read in his Jour-

nals the very papers he listened to, and cull from them the practical application of such parts as are of interest to him and of actual value in his work.

The practicability of the subjects chosen for the Annual Fall Clinical Conference at Kansas City, October 9, 10 and 11, is well shown by a brief inspection of the program printed on page XXVI, this issue. While this program may not arouse any marked enthusiasm on the part of the specialist, it will undoubtedly appeal strongly to the general practitioner as a practical post-graduate course in his every day problems. It is the purpose of the Clinical Society this fall to present only such practical subjects and discuss the problems of the busy man in general medicine.

—R—

### BOOKS

The Examination of Patients. By Nellis B. Foster, M. D., Associate Physician to the New York Hospital; Associate Professor of Medicine at Cornell University College of Medicine. Second Edition, Revised. Octavo of 392 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1928. Cloth \$4.50 net.

In this the second edition of this book the author has included differential diagnosis which has added considerable to its value. The high points in diagnosis are briefly and clearly stated. It is sufficiently well illustrated to clarify obscurities in the text. It is quite up to date in every particular.

The Heart in Modern Practice, diagnosis and treatment by William Duncan Reid, M. D., assistant professor of cardiology Boston University School of Medicine, etc., Second edition. Published by J. B. Lippincott Company, Philadelphia.

The author endeavors to follow the classification adopted by the American Heart Association and has otherwise greatly improved the text. Considerable space has been given in this edition to the arrhythmias and the author has tried to combine the graphic and clinical aspects for the greater benefit of the practitioner. Several subjects have been added and considerable new matter on old subjects.

Story of Electricity including a chronology of electricity and electrotherapeutics by Herman Goodman, M. D. Published by Medical Life Press, New York. Price \$1.50.

This is a very interesting history of the men who have added something of importance to our knowledge of elec-

tricity and the parts contributed by each of them. He begins with Newton for he performed the fundamental experiment in the discovery of the spectrum. He refers to Franklin as the first American scientist and his work was in static electricity. Each step in the development of electricity is carefully recorded.

*Folklore of the Teeth* by Leo Kanner, M. D. Published by The Macmillan Company, New York.

The author says that of all of the organs of the body there is none that is surrounded by such an enormous wealth of folklore as the teeth. He has for many years collected material from many sources and yet feels that with time and effort a great deal more could be added. The quill tooth pick dates back at least to the first century before Christ, while the tooth-brush is of much more recent date, probably not more than two hundred years old. There are a number of very interesting chapters in this book that tell of the many peculiar beliefs and superstitions of the past.

*The Surgical Clinics of North America* (Issued serially, one number every other month.) Volume 8, number 3. (Chicago Number—June 1928) 219 pages with 49 illustrations. Per clinic year (February 1928 to December 1928.) Paper \$12; Cloth \$16. Philadelphia and London.

Both surgeons and internists will find much to interest them in the June number of *Surgical Clinics*. Bevan's clinic includes some cases of abdominal diseases. Speed describes epiphysitis of the femur. Kreuscher describes the incisions for the best approach to the major joints. Eisendrath presents some causes of failure after bladder neck operations. McWhorter shows a number of instructive cases. Nadeau gives a differential diagnosis of carcinomatosis and tuberculous peritonitis by means of the cystoscope. David's clinic is concerned with surgery of the biliary tract. Straus exhibits a splint for non-union in fractures of leg; and a portable apparatus for traction on skin in arm amputations. Herbst presents a series of kidney and bladder cases. Andrews and Bump present some surgical cases and describe a case of fatal postoperative alkalosis. There are also clinical cases presented by Oliver, Gallagher, Martin, Pickett, F. H. Straus, Herb, Koucky, Apfelbach and Montgomery.

*Calcium Therapy*, the fundamental principle underlying rational therapeutics by John Aulde, M. D., formerly assistant physician, out-patient department Jefferson Medical College Hospital, etc., and author of numerous medical books.

Perhaps a quotation from the author will give the best idea of the purposes and contents of this book. "Every progressive physician who will study the data herein enumerated must admit that while the theories put forward are radical, they are plausible and worthy of verification . . . the teachings are so novel, the results so incredible and the clinical data so contradictory when compared with standardized medicine, that it is doubtful if anyone unless he possesses unusual intellectual ability and mental stamina can take up the work and proceed intelligently on his own account."

*Nurses, Patients and Pocketbooks*, report of a study of the economics of nursing conducted by the committee on the grading of nursing schools by May Ayres Burgess, Director.

This is the first report of the committee and gives the facts they have so far gathered. It also gives a large number of opinions about nurses and nursing expressed by those who have employed nurses, and statements from nurses about the character of the demands made upon them, and the opinions of doctors also. The hospital situation in regard to nurses is also analyzed. The problems that confront us are made clear and it is to be hoped that ultimately the committee will be able to offer some rational solution.

*Clinical Medicine*. By Oscar W. Bethea, M. D., Ph. G., Professor of Therapeutics, Tulane Graduate School of Medicine; Professor of Clinical Therapeutics, Tulane School of Medicine, New Orleans, La. Octave volume of 700 pages. Philadelphia and London; W. B. Saunders Company, 1928. Cloth, \$7.50 net.

The author feels that most of the literature on the practice of medicine is based on work in hospitals and in wealthy homes where the best advantages are available, while the greater part of a practitioner's work is in homes and under conditions offering limited facilities. He has therefore attempted to present here a book for service in the latter kind of practice. He has given considerable attention to treatment, particularly to medication, and has given numerous prescriptions for various ail-



ments. A good many of these the older practitioners will recognize and no doubt many will feel that they were quite as effective as more modern remedies for which they have been discarded.

International Clinics, a quarterly of illustrated clinical lectures and especially prepared original articles. Edited by Henry W. Cattell, M. D., with the collaboration of numerous others. Volume II, thirty-eighth series, 1928. Published by J. B. Lippincott Company, Philadelphia.

In this volume are three articles on periostitis of the jaw bone that are instructive. Frazer discusses the subject of industrial trauma as a factor in diseases of the lower genito-urinary tract. Brickner and Milch contribute an article on rupture of muscles and tendons. Schnabel has a paper on gastric syphilis and Willis one on bronchiectasis. Lyon of Edinburgh contributes an article entitled "Diabetes Mellitus not a Contagious Disease." Balfour and Henderson present a synopsis of the recent advances in surgery. Lodholz discusses death from the standpoint of the physiologist. Cumston gives a history of the treatment of syphilis from its early beginning.

Syphilis, a treatise on etiology, pathology, symptomatology, diagnosis, prognosis, prophylaxis and treatment, by Henry H. Hazen, M. D., professor of dermatology and syphilis, Medical Department of Georgetown University and in Medical Department of Howard University, etc., Second edition. Published by C. V. Mosby Co., St. Louis. Price \$10.

This very excellent and complete work on syphilis has been thoroughly revised, much of it rewritten, particularly the chapters on syphilis of the nervous system, diagnosis, prophylaxis and treatment. The chapter on treatment covers the modern methods thoroughly. The author while admitting the weight of evidence indicates that early treatment promises more permanent cures, states that in his own practice the percentage of permanent cures has been much higher in those cases in which the Wassermann reaction had been positive.

Annual reprint of the reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1927. Cloth. Price, postpaid, \$1. Pp. 103. Chicago: American Medical Association, 1928.

The Council on Pharmacy and Chemistry of the American Medical Association annually publishes the reports which tell the reasons for non-acceptance of those

products which during the year it has found unworthy of recognition. Some of these reports have been published in abstract in The Journal; all are contained in full in the volume which is the subject of the present review. The physician who has learned to ask the manufacturer's "detail" man, "If it is not in New and Non-official Remedies, why is it not?" will find here the answer which that personage will no doubt hesitate to give him. The book shows the practical working out of the principles which the Council's experience has shown to be essential in its fight for rationality in the field of proprietary medicines.

A glance at the index shows, however, that these reports do not always deal with articles that have been actually rejected by the Council. Preliminary reports are frequently made on new products which appear promising but for which there is not yet sufficient evidence to warrant inclusion in New and Non-official Remedies.

Of much current interest is the reprint of the report of Dr. R. A. Hatcher reviewing the literature on the Gwathmey method of colonic anesthesia and evaluating the present standing and usefulness of this method.

New and Nonofficial Remedies, 1928, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1928. Cloth. Price, postpaid, \$1.50. Pp. 489 XLIX. Chicago. American Medical Association.

This book is the work of the Council on Pharmacy and Chemistry of the American Medical Association. The Council's plan was and has been the publication annually of a book containing descriptions of those unofficial preparations which after careful investigation have been found worthy of recognition and consideration by the medical profession. Such has been the devotion of the Council members, who serve without remuneration, and such the recognition achieved by their work that today the book described all the new proprietary products which have a scientific base and which give promise of therapeutic usefulness. The physician who best safeguards his own interests as well as those of his patient will give no con-

sideration to any proprietary medicinal agent which is not listed in New and Non-official Remedies.

The book is conveniently arranged for reference: each preparation is classified, and each classification is preceded by an authoritative and up to date discussion of the composition, actions, uses, and dosage of the medicament involved. Annually the book is carefully scrutinized and revised to ensure its being in the forefront of medical progress. Products that have been admitted are reexamined at stated intervals to determine if they are keeping their promise of therapeutic usefulness; and new products are admitted as they are found acceptable.

Among the more important revisions this year are: the rewriting or recasting of the chapters on Medicinal Foods, Insulin, Arsenic Compounds, and Iron and Iron Compounds; revision of the chapters on Ovary and Parathyroid to make them conform to the results of recent research; and revision of the names and standards of the acriflavine dyes. A noteworthy omission is that of all parathyroid gland preparations, designed for oral administration, their lack of efficacy by this route having been conclusively demonstrated.

The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1927, Volume XIX. Edited by Mrs. M. H. Mellish and H. Burton Logie, M. D. Octavo volume of 1,330 pages with 412 illustrations. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, \$13 net.

The papers contained in this volume have been selected from the papers written by members of the staffs of The Mayo Clinic and The Mayo Foundation, the basis for selection being the interest the subject has for the greatest number of readers. A considerable variety of subjects is noted, and a considerable number of reports of experimental studies will also be found. Those who have kept in touch with the work at the Mayo Clinic will welcome this volume, others will find it instructive and well worth adding to the library.

**Modern Methods of Treatment** by Logan Clendenning, M. D., associate professor of medicine, lecturer on therapeutics, Medical Department of the University of Kansas, etc., with chapters on special subjects by several others. Second edition. Published by C. V. Mosby Co., St. Louis. Price \$10.

This book has been thoroughly re-

vised and considerable new matter has been added. Among the new subjects discussed are the Minot-Murphy diet in pernicious anemia, scarlet fever antitoxin, the parathyroid hormone, the ovarian hormone, ephedrine sulphate, novasurol and ammonium chloride in edema, the malarial treatment of neurosyphilis, lipiodol instillations in lower respiratory infections, the metabolism of obesity, spirochetal pulmonary infections, peptone in migraine, and phenylhydrazine in polycythemia. There has also been added much new matter on older subjects.

**Gynecology.** By William P. Graves, M. D., Professor of Gynecology at Harvard Medical School. Fourth Edition, Thoroughly Revised. Octavo volume of 1,016 pages, with 562 illustrations, 128 in colors, Philadelphia and London: W. B. Saunders Company, 1928. Cloth \$10.50 net.

The author has completely revised this work. It has been practically rewritten and many new subjects have been introduced. There has been much that is new in the physiology of menstruation and ovulation to be added to the older discussions of these subjects. The author presents some new material on the etiology of pelvic cancers as well as the new methods of treatment. The subjects of diathermy, protein therapy, the sedimentation test, leukoplakia and kraurosis, and many others are fully discussed in this edition.

**Clinical Gynecology and Obstetrics**, a handbook by Rae Thornton LaVake, M. D., assistant professor of obstetrics and gynecology University of Minnesota, etc. Published by C. V. Mosby Co., St. Louis. Price \$4.

The author's aim is to present the methods of diagnosis and treatment that have proved most efficient in his own experience, and the book is intended to meet the requirements of students and practitioners. The obstetric problems are presented in accordance with their relative practical importance.

**Addresses on Surgical Subjects.** By Sir Berkeley Moynihan, Bart., President of the Royal College of Surgeons of England. Octavo of 348 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, \$6 net.

Those who have had the privilege of hearing Moynihan or have read other essays by him will certainly appreciate this collection, which consists of fourteen essays and addresses. While these



have already appeared in various medical journals they have not been available to many of us. One of the addresses that will appeal particularly to our readers is The Murphy Oration in which the contribution to surgery by Dr. John B. Murphy is fittingly described.

Operative Surgery by J. Shelton Horsley, M. D., attending surgeon St. Elizabeth's Hospital, Richmond, Va. Third Edition. Published by C. V. Mosby Co., St. Louis. Price \$15.

Considerable new matter has been added in this edition and numerous new operations are described among which are the operation of Dandy and Singleton for tic douloureux of the ninth nerve, the radical phrenicotomy of Felix, the operations of Cutler and Beck on the heart, the cardiolysis of Marvin and Harvey, the operations of Sauerbruch and Brauer for thoracoplasty, Wheelodon's operation for bunion, McGuire's operation for hypospadias, and many others. Considerable space is given to plastic surgery of the face and the face lifting operations of Hunt and Miller are described.

The Medical Clinics of North America (Issued serially, one number every other month.) Volume 11, Number 6, (Mayo Clinic Number, May 1928.) Octavo of 330 pages with 89 illustrations and complete Index to Volume 11. Per Clinic year, July 1927 to May 1928. Paper, \$12; Cloth \$16 net. Philadelphia and London: W. B. Saunders Company.

Eusterman's clinic shows cases of recurrent gastric ulcer associated with gastroduodenal ulcer in the presence of constant gastric acidity, also a case of hemochromatosis. Hartman presents his study of four-hundred cases of jaundice. Weir discusses the preoperative treatment of complications of gastroduodenal disease. Snell presents some problems in the treatment of patients with ascites. Mussey discusses preeclamptic toxemia. Rowntree has a very interesting article on sidelights on hypertension. Allen presents some cases of clinically arrested thrombo-angiitis obliterans. Parker presents some phases of recurrent attacks of unconsciousness. Rentschler has an article on gouty arthritis. Allan and Wilder present the treatment of erysipelas with antitoxin. These are just a few of the contributions picked at random but they are sufficient to indicate the scope of the complete collection.

The Duodenum, medical, radiologic and surgical studies, by Pierre Duval, Jean Charles Roux and Henri Beclere of the Surgical Clinic, Faculty of Medicine, Paris. Translated by E. P. Quain, M. D. Published By C. V. Mosby Co., St. Louis. Price \$5.

This is a very elaborate treatise on the duodenum and should be appreciated by the profession. The authors stress the fact that there are numerous lesions and conditions of the duodenum that give rise to symptoms and may endanger life, besides duodenal ulcer. In this book will be found explanations for the distressing digestive disturbances that have not been relieved by operative procedures even when justified by the presence of definite lesions. This work deserves careful study by both surgeons and internists.

Diseases of Throat, Nose and Ear by Dan McKenzie, M. D., surgeon Central London Throat and Ear Hospital, etc. In two volumes. Second edition. Published by C. V. Mosby Co., St. Louis. Price \$17.

This work has been revised and much enlarged. The author is very faithful to detail especially in the examination of the patient, a feature which should recommend the work. Surgical treatment is given greatest prominence, but the operations are carefully described. There are also numerous excellent illustrations.

Diathermy, its production and uses in medicine and surgery by Elkin P. Cumberbatch, M. A., B. M., medical officer in charge electrical department, St. Bartholomew's Hospital, etc. Second edition. Published by C. V. Mosby Co., St. Louis. Price \$7.

Since diathermy has found a definite place in medicine there is occasion for books of this kind. While the author devotes considerable space to the mechanics of diathermy and the description of various machines he makes the mechanical principles clear. His clinical experience is, however, of more importance, for he explains the various effects upon the tissues. In describing the results in the treatment of different conditions at the hospital he has not been biased, but has stated both favorable and unfavorable results.

—R—

### **Pulmonary Abscess and Pulmonary Gangrene**

Pulmonary abscess was observed by B. S. Kline, Cleveland (J.A.M.A., June 23, 1928), more frequently in children than in adults, and in the majority of in-

stances was apparently of aspiratory type. The remainder, embolic in type, were invariably associated with abscesses elsewhere in the body and almost always with a staphylococcus septicemia. The prognosis in cases of aspiratory lung abscess is fair. There is conclusive anatomic and experimental evidence that pulmonary gangrene is caused by a group of organisms, notably spirochetes, fusiform bacilli and vibrios, aspirated from the oral cavity. In cases observed clinically, a careful examination of the sputum is sufficient to enable one to make a differential diagnosis between pulmonary abscess and pulmonary gangrene. In the cases of pulmonary abscess, the sputum is mucopurulent or purulent without appreciable odor. When washed it shows the pyogenic organisms in cultures and in smears stained by the Gram method. In the cases of pulmonary gangrene, on the other hand, the sputum is foul smelling and grayish brown or grayish green, and when carefully washed it shows the characteristic spirochetes, fusiform bacilli and vibrios in smears stained by strong carbolfuchsin solution or by the Fontana method. As the cases of pulmonary gangrene do not respond well to the treatment for abscess but are frequently cured by ar-sphenamine therapy, the differentiation between these two diseases is imperative. Spirochetal pulmonary gangrene may be prevented by proper oral hygienic or therapeutic measures.

#### **Treatment for Split Finger-Nails**

William Wesley Carter, New York (J.A.A.M., May 19, 1928), reports the case of a girl, aged 18, who had a split nail on the middle finger of the right hand; the split reached almost to the root of the nail and had resulted from an injury to the finger six years before. As the nail grew out, the apex of the slit would remain at about the same place. He advised her to let the nail grow about three-eighths inch beyond the end of the finger and then to return for treatment. He then made a drill from a cambric needle and with this made three opposing holes on each side of the slit. He passed sutures through corresponding holes and drew the edges of the nail

close together as possible. The finger was then bandaged for protection. As the nail in growing protruded the distance between two of the sutures, the distal end of the nail was pared and another suture placed near the end of the finger. This process was kept up until the apex of the slit was well beyond the end of the finger. A complete cure was effected in six weeks and after the lapse of three years the nail is perfectly normal.

#### **Dextrose-Insulin Treatment of Shock**

Dextrose-insulin treatment of shock is discussed by Preston A. Wade, New York (J.A.M.A., June 9, 1928). He says the use of dextrose intravenously with insulin subcutaneously in the treatment of shock gives results which, in this series, seem more satisfactory than those obtained in cases treated by saline or dextrose solution alone. Cases of traumatic shock treated early respond most readily to this treatment. Cases of post-operative shock treated in this manner show marked improvement. The optimal dosage is 1.000 cc. or 5 or 10 per cent dextrose with 1 unit of insulin to 3 Gm. of dextrose. Beneficial results are usually apparent after 800 cc. of fluid has been injected. Cases of shock in which the blood pressure is decreasing toward the "critical level" (80 to 90) should be treated immediately before the rapid fall which usually follows, with symptoms of severe shock.

#### **Scurvy With Reference Especially to Adults**

The cardinal diagnostic points in the seventeen adult cases of scurvy from the Boston City Hospital records were, according to George C. Shattuck, Boston (J.A.M.A., June 9, 1928): 1. Extensive painful ecchymoses involving the legs. 2. Swelling of the gums in patients having teeth. 3. Absence of the blood changes characteristic of purpura hemorrhagica (namely, marked decrease of blood platelets, prolonged bleeding time, and failure of the blood clot to retract.) 4. A history pointing to dietary deficiency. It is necessary to exclude hemophilia; the acute infectious diseases, including arthritis, of which purpuric



spots may be symptomatic; the toxic purpuras, including those due to drugs, to benzene poisoning or to liver disease, and, probably, certain hysterical states and mechanical vascular defects. Other forms of "cachetic purpura" have been described as being related to cancer, tuberculosis, Hodgkin's disease, nephritis and old age. In such cases the possibility of a scorbutic basis should always be borne in mind, and the therapeutic test might well be applied before excluding scurvy. It is clear that well marked scurvy in the adult may easily pass unrecognized and that failure to make the diagnosis is generally due to failure to consider the possibility of scurvy. If well marked cases may thus escape diagnosis there must be a great many ill defined cases of "purpura," albuminuria, hematuria, nosebleed, indigestion, weakness, anemia, "rheumatism," visual disorders or bad teeth which could be much benefited by antiscorbutic treatment. In our highly developed modern civilization the use of preserved or "ready-to-serve" articles of diet and dietary fads is playing an ever increasing role. He asks whether scurvy may not be expected to increase among the ill nourished poor, and even appear occasionally among those in easy circumstances.

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### Blueberry Leaf Extract

Myrtillin, a substance of unknown nature and composition, which occurs in all green plants, especially the blueberry and various myrtles, supposedly has a physiologic function in the normal carbohydrate metabolism of plants and perhaps of animals. It is not insulin or a substitute for insulin, but it exerts some positive and easily demonstrable influences in normal and depancreatized dogs. Animal experiments probably constitute the most rigorous objective test that can be applied to a diabetic remedy, and Frederick M. Allen, Morristown, N. J. (J.A.M.A., Nov. 5, 1927), believes that the striking and uniform benefits in diabetic dogs justify the trial of myrtillin in human beings. The advantages of myrtillin are that it can be taken by mouth, it is harmless under all conditions, and instead of causing hypoglycemia it tends rather to

prevent it. These are qualities which will appeal strongly to patients and also to physicians; and another advantage for the general practitioner is that most of the cases treated by him belong in the milder group which, on the whole, react most favorably to myrtillin. There are, however, the disadvantages that myrtillin in general is feeble and uncertain as compared with insulin. It is useless against acidosis or infections, and it should not be given to glycosuric patients in the expectation of seeing the sugar clear up as it does under such a powerful agency as insulin. It is best to abolish glycosuria and hyperglycemia by the necessary preliminary measures, and then to give myrtillin as a means of gradually raising tolerance or reducing insulin. A considerable proportion of failures must be expected, especially in the severest cases and in young patients. The favorable results, when obtained, are more lasting and tend more in the direction of cure than those of any method heretofore known under any diabetic treatment. Exceptional patients have been relieved of insulin dosage ranging above 50 units daily, and have also discontinued weighing their diet. As a rule, only smaller degrees of benefit are to be expected, and exaggerated hopes should be discouraged. Allen's belief, after two years of investigation, is that myrtillin plays some accessory part in carbohydrate metabolism, and that if properly used it will prove valuable as an accessory factor in diabetic treatment.

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### Basal Tuberculosis

Kennon Dunham and V. V. Norton, Cincinnati (J.A.M.A., Nov. 5, 1927), report the results of their study of sixty cases of basal tuberculosis in the form of a pulmonary tuberculous lesion which involves a base before either apex is involved. Fibroid apical tuberculosis differs from basal tuberculosis not only by its location but also by the clinical course and the pathologic anatomy. Roentgen-ray plates show two different types of lesion; tuberculous caseous bronchopneumonia and tuberculous pneumonia. Of the sixty cases studied, forty-nine stimulated caseous bronchopneumonia, and

eleven simulated tuberculous pneumonia. Of the forty-nine, there were twenty-two cases in the lower lobe and seventeen in the upper lobe. In ten the involvement was so general that it was difficult to say which lobe was first involved. In the eleven of the tuberculous-pneumonic type the condition was reversed, and there were four lower lobes and seven upper lobes primarily involved. Of these sixty patients, seventeen were of the caseous bronchopneumonic type. Thirty-four died in the hospital, and in nineteen of these autopsy was performed. All showed lesions in other parts of the body, as follows: adenitis, including both thoracic and abdominal glands, nine; following pleuritis, three; genito-urinary tract, two; following peritonitis, two, and joint, one. A basal lesion is a very virulent type of infection, more common in the negroes, and in that race almost uniformly fatal. Clinically, these cases have two forms of onset; one acute with high fever simulating pneumonia and the other insidious, more like the ordinary apical variety but running a more rapid course. The acute onset is more common with the pneumonic type, and the insidious onset with the bronchopneumonic type; but this will not always hold *with* either type of case. The etiologic diagnosis is very difficult from the history, symptoms, physical observations and roentgen-ray plates. The roentgen-ray plates will suggest the disease, but the accurate diagnosis of basal tuberculosis depends on positive sputum, positive animal inoculation and other definite laboratory proof of tuberculosis. The authors contend that the only pulmonary tuberculous lesions which can be so diagnosed from the roentgenograms are apical lesions with fans of differing densities. Basal tuberculous lesions may closely resemble syphilis, bronchiectasis, malignant growths, hemorrhage or unresolved pneumonia.

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#### **Brucella Abortus Infection in Man**

The seven cases here reported by R. L. Sensenich and Alfred S. Giordano, South Bend, Ind. (J.A.M.A., June 2, 1928), may be readily classified in three groups, comparable to the classification ordinarily

followed in undulant fever due to *Brucella melitensis*, as follows: (1) undulant; (2) intermittent, and (3) ambulatory. The characteristic symptoms of *Brucella abortus* infection in man are anorexia; loss of weight and strength; headache, and chills and fever and sweats of varying intensity throughout long periods of time, frequently with intermissions. The fever has a tendency to exhibit undulations which may vary in character and in length. Evidence of the effect of the disease on the nervous system is constant and arthritis is a common symptom. The consideration of *Brucella abortus* infection in the differential diagnosis of all conditions exhibiting variable combinations of these symptoms will undoubtedly reveal more frequent occurrence of this disease. Isolation of the organism from the blood or a positive agglutination reaction makes the diagnosis definite, although the disease may be present with negative manifestations.

—————R—————

#### **Subacute Combined Sclerosis Progressive During Remission of Pernicious Enemia**

In the case reported by Armand E. Cohen, Louisville, Ky. (J.A.M.A., June 2, 1928), while marked systemic improvement resulted from the Murphy-Minot diet, the patient not only showed no improvement in the neurologic condition but developed a pronounced ataxia and other distressing nervous symptoms during an otherwise favorable remission. This case is of especial interest in that the more marked neurologic symptoms developed after the patient had been on the Murphy-Minot diet several months and was enjoying an otherwise distinct general systemic improvement.

—————R—————

#### **Insulin Therapy in Undernourished Psychotic Patients: Preliminary Report**

The results obtained by Kenneth E. Appel, Clifford B. Farr and Harold K. Marshall, Philadelphia (J.A.M.A., June 2, 1928), in thirty-three cases indicate that insulin treatment properly controlled is a valuable adjunct in the treatment of certain critical cases of undernutrition in psychotic patients. The appetite and the amount of food intake were usually





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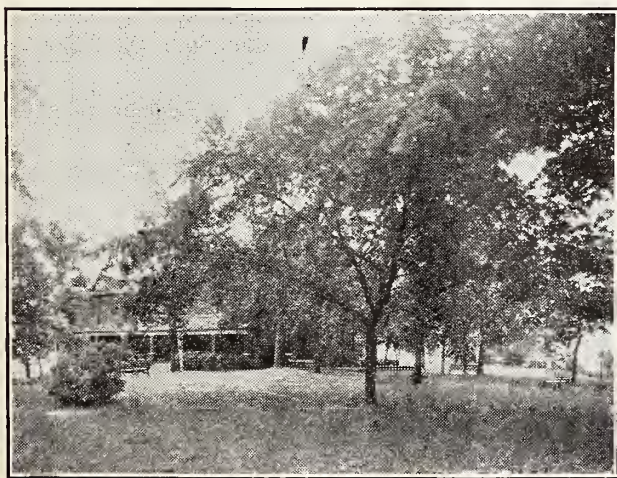
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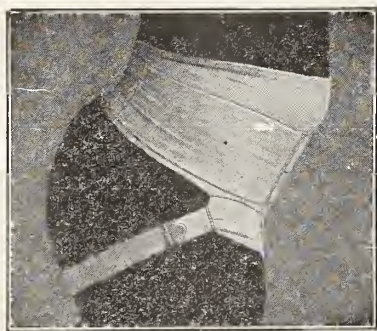
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a marked increase in weight. The dry, gray skin in most cases took on a healthy color and turgor. The effect of the treatment on the mental status is difficult of appraisal. In approximately 20 per cent of the cases, definite improvement was observed. The special diet (including the extra lunches) which was given in all cases during insulin administration yielded approximately 4,000 calories, containing about 350 Gm. of carbohydrate. Dextrose for intravenous use, and orange juice for administration either by mouth or by nasal tube, were constantly kept on hand. All patients were under the continuous supervision of nurses who were familiar with the symptoms of hypoglycemia. Sixteen male patients were put on the routine diet for four weeks and made an average weekly gain, per patient, of 3 pounds (1.4 Kg.). Of the eleven patients in whom treatment was completed long enough to permit subsequent observation for four weeks, six gained over the weight at the end of the treatment, one remained stationary, and four lost. The increase was greater than the decrease, so that the weight gained was more than maintained. Each of thirteen female patients on the special diet alone for four weeks gained 9-10 pound (0.4 Kg.) weekly. In the following three weeks on the same diet plus insulin, they gained 2-4-10 pounds (1.1 Kg.) per patient weekly. One patient, not given the preliminary diet, gained 11 pounds (5 Kg.) in twelve days and showed considerable mental improvement. Three patients were given doses of

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insulin varying from 5 to 25 units daily for from two to eight weeks without any apparent result. In four cases the treatment had to be discontinued on account of symptoms of insulin intolerance, although in some of these cases the blood sugar did not reach low levels.

— R —

## RELAXATIVES

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### Owl Town Reminiscences

#### "Docs of the Old School I Have Known"

Doc Bivens of New Hope,  
The Village of my birth,  
Ruddy face, genial smile,  
Large abdominal girth.  
A real Doc of Old School type,  
Rolled pills, did it well,  
Carried in his saddle bags,  
Rhubarb and calomel.  
Doc Fee of Georgetown,  
Fifteen miles away,  
Mother's obstetrican when  
I first saw light of day.  
You may say I must have had,  
Unusual memory,  
I am just repeating what  
My mother said to me.

Doc Griffith, Doc Sparks,  
Both of Morgantown,  
One was never known to smile,  
The other not to frown.  
Doc Sears, for customers,  
Not compelled to beg,  
He had a sure cure  
For Round Worms and Milkleg.  
In Owl Town back in eighty-six,  
My chief competitor,  
Uneducated, dull, uncouth,  
Was old Doc Tolliver.  
He ordered a thermometer,  
By Post to him 'twas brung,  
He never learned which end of it  
Went underneath the tongue.  
He had a typhoid patient,  
Most desperate situation,  
Alarmed, the family, at last,  
Demanded consultation.  
"How is he, Doc?" consultant asked,  
"Some better, yesterday  
It took three men to hold him down,  
But one's enough today."  
Those were the days of saddle bags,  
Quinine and calomel,  
If they failed to produce a cure,  
It meant a last fairwell.  
Doc Smith, whose sovereign remedy  
Was Denver Mud, in layers,  
His office was the rendezvous  
Of all the checker players.  
One eye a-squint, hog bristle hair,  
Complexion, bacon rind,  
A scowling face, stoop shoulders,  
But considerate and kind.

—J. T. Scott, M.D.

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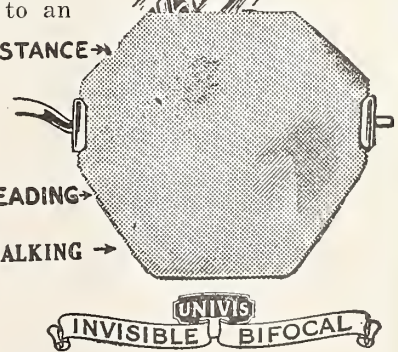
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or the vocation requires special handling; (3) that the size of the segment should be governed, to a large extent, by the pupillary distance and the size of the pupils."

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# THE JOURNAL

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### Building Up the County Medical Society

W. GORDON EMERY, M.D., Hiawatha

Read before the Kansas Medical Society at its Annual Meeting, May 8-10, 1928, at Wichita, Kansas.

The average rural county medical society is only a paper organization so far as constructive work in the profession and among the laity is concerned, in spite of the efforts of a few men in many of them to make it an effective force.

There are a few instances where influential organizations have been built up. The success of these societies serves to emphasize the necessity of every county society organizing effectively, thereby bringing into our national and state work as well as county endeavors, the tremendous force of practically the entire medical profession, all of whom are in close contact daily with the general public, using their best influence, individually and collectively, for the highest professional standards in the art of healing and the best public health measures.

How to build up the county societies is a problem actively interesting the thoughtful men in constructive medical work. While I have nothing of startling originality to offer toward the solution of this problem, and while the various items which make up the suggested program have all been proven in one county society or another, never, so far as I can learn, have they all been brought together. Nor, I believe, has sufficient emphasis been placed on the first ingredient of this prescription—the preliminary pledging of members.

The State and National organizations have their educational, political and scientific work. They are doing it well. Still, there is much to be desired in the matter of accomplishment, which cannot be done until the county societies as a whole function effectively. The success

of our state-wide, nation-wide programs for public health education and legislation, particularly, depends more upon the effective organization of the county society than upon anything else.

In my mind the key to the solution is selling the possibilities of his own profession to the individual physician. Rather extraordinary that the potentialities of a man's own business should have to be urged upon him! Nevertheless, I believe it is true. Also, this is the initial and perhaps the most laborious part of effective organization, since the onus falls on a very few men; and the success of our proposed program is won or lost by the thoroughness with which this is done.

Although the program which I am about to suggest is an ambitious one, I believe it is entirely practicable, unless the county society contains too many dead ones—doctors whose fire for achievement is quenched; whose ambition to progress has become dulled, who are so selfish that they cannot endure general prosperity unless the lion's share is theirs; or so egotistical that their ideas, and theirs alone, are workable. Fortunately, there are few such physicians in any county society.

Some doctors have become so accustomed to their own rut that they "don't give a damn," as they honestly announce. But "show them," and give them a definite responsible task and their interest will be revived.

Theoretically, doctors associations are formed for mutual scientific advancement and mutual protection in the various phases of their profession. We have County, State and National organizations. The County Society is the basic unit of the State and National Associations. It is, therefore, in many respects, the most important of the three. Certainly to the individual physician it is

the most important, or perhaps I would better say, *should* be the most important. For, sad to relate, while it is potentially a powerful influence, except in scattered instances, only a minority of individual physicians show an active interest in this society. This is true, even in societies whose memberships list all eligible doctors. But while 100 per cent memberships are greatly to be desired, the measurement of a society is not numbers but accomplishments.

Why is the County Association the most important of medical organizations? It is because of the intimate, frequent association of individual members with each other and with the laity. Because of this they may devise and make effective those measures of scientific advancement, public education, self improvement and mutual protection so necessary to our work and the public welfare.

If it is true that an organized body of intelligent men can accomplish more than the undirected, scattered efforts of the same number of individuals, then there is reason for every man practicing medicine to give to his county society his *loyal, active* support. Of course, if the practice of medicine is a monopoly of the art of healing; if it has arrived at the ultimate scientific point where further advance is impossible; if all members are imbued with the spirit of fraternal love and practice the Golden Rule, then we have no need for any organization. Unfortunately, quite the reverse is true: Scientific advancement is rapid, medicine is far from being a monopoly. Instead of the Golden Rule, David Harum's paraphrase, "Do the other fellow as he would do you, but do him fust!" is too often the rule.

Every doctor in a county medical society is above the average in general intelligence and information. In matters of knowledge pertaining to subjects of health they are foremost in their communities. Therefore they are potential leaders.

Why, then, are they so often disregarded? Why is their influence so small that the uneducated cultist finds so large a following? Why do legislators refuse to pass laws necessary for public protec-

tion, but favor, instead, the commercial cult? It is because our organization is ineffective; we are not using our potential power.

Do we desire restored what we have lost of public confidence? Do we desire to improve our individual incomes? Do we desire to increase our ability in relieving and preventing disease? Do we desire to feel kindly toward our fellow doctors? In short, do we desire our profession to live up to its full capacity of usefulness? Of course we do. Then we must have an effective organization in the county.

How shall we make it so? First by every doctor becoming a member of the County Society; second, by every doctor firmly resolving to do his utmost to advance the common cause. This latter means regular attendance upon meetings in order that a full expression of opinion may be heard and full co-operation obtained. In order to accomplish this I would stress the importance of full and frank discussion of differences. I would emphasize the necessity of a strong social program by which doctors could fraternize intimately and freely.

In a scientific way, we, with our limited resources, may not expect to do much original work, but discussions of our own unusual or difficult cases are always instructive. Also, an occasional paper on definite advances in our science, art or technique should be of value. As an extra treat the importation of some expert once or twice a year.

To regain what we have lost in public confidence and esteem should be a large part of our work. In this line this thought occurs to me: It is difficult not to feel grateful to and to like him who is giving more to you than you are giving to him, especially where such gifts are apparently not actuated by self interest. Success in this department of our program depends upon the diplomacy with which it is managed, and on success here, depends the winning of the co-operation of the laity in our legislative and public health programs as well as allegiance to our professional theories and practice.

Members should talk with their more intelligent patients to discover what sub-



jects of public health education interest their patrons, of what they are most desirous of information; along what lines they have been misinformed or cherish false beliefs. A comparison of information thus acquired will show, I think, astonishing similarity. These, then, should be the basis of our first discussions in our regular open meetings.

These open meetings should be noted in the public prints, but each doctor should personally invite as many of his patrons to attend as possible, explaining why the laity will be interested. The personal interest which the doctor takes in his patrons in connection with these meetings cannot be approached in effectiveness by any other form of advertising.

Special public meetings with state speakers or other especially qualified physicians as often as practicable should be handled in much the same manner. Also, a clinic for children or T. B. once or twice yearly. These meetings will draw good attendance, but there will remain a large number of people not so reached. To acquaint this class with our endeavors and accomplishments; to educate them in the reasonableness of our theories and practice, we should carefully plan a series of terse, easily understood items for regular insertion in the leading local papers. These should be paid advertisements so that there will be no blue penciling by the editor. This is an important part of our campaign and enough carefully edited reading matter for several months should be on hand before starting the campaign. Also, the items should be written in lay language, interestingly—newspaper English in other words.

Not the least important in our fight to win back public confidence should be our demeanor toward each other in our professional contacts with the laity. This need not be an acted role. Charles Lamb, walking along a London street with a friend met a man with whom they exchanged salutes, "I hate that man!" exclaimed Lamb. "Why you can't *know* him!" protested his friend. "Of course not," replied Lamb, "if I really *know* anybody I *can't* hate him!"

So, then, there is the reason for a strong social program, to bring all members together socially and intimately. It is surprising how a frank discussion of differences after a pleasant dinner will iron things out. It is equally pleasing and surprising to see how some lone wolf of a recalcitrant member will gain the gang spirit when his suspicions are allayed and he finds that the whole pack is working for a common end.

By all means encourage the ladies of physicians' families to form an Auxiliary. They may or may not, as seems preferable, meet with the regular society; but they can and will carry our propaganda into their women's clubs and church organizations. They are potent, too, in getting their lazier spouses out to the meetings.

Credit protection is a necessary part of our business. A dead-beat list should be arranged, kept up to date and the list communicated to all members. This may or may not function also as a collection agency, as seems preferable. It acts as a powerful influence in obtaining money from unwilling debtors, especially if there is an agreement among the doctors to refuse service to such people except for cash on the nail. We should, of course, distinguish between worthy charity and dead-beatism.

A fee schedule should be agreed upon.

This is an ambitious program, but it seems to me that every item is essential. It cannot be half well done by half a dozen men. With every member of a county society co-operating it can be done in its entirety. Undoubtedly the proportion of accomplishment will be measured by the number of members co-operating whole-heartedly.

The various items of this program will, upon analysis, show enough divisions and sub-divisions to warrant the appointment of several chairmen and sub-chairmen; enough detail to use importantly every member of a rural county society.

In arranging the program the executives will choose a small committee to "sell" it to the individual members and obtain their pledges to sincere co-operation. This done, the chairmen will be carefully selected. When the committees

are finally made up every member will find himself on a committee and the various chairmen will make each member personally responsible for a part of the work.

The various parts of the program would be synchronized and harmonized by the committee on the whole—the entire society in meeting assembled.

Then once a year I would have a whale of a “blow-out” and invite our friends. A blow-out which would keep us happy and optimistic and willing to work hard for another year.

### **Acute Intestinal Obstruction**

R. S. HAURY, M.D., Newton

Read before the Kansas Medical Society at its Annual Meeting, May 8-10, 1928, at Wichita, Kansas.

Without entering into a discussion of the causative factors underlying acute intestinal obstruction, the following important ones should be mentioned: Tumor, which usually is a carcinoma; gall bladder disease; acute appendicitis; adhesions; intussusception; volvulus; internal strangulation; inguinal, femoral or umbilical hernia.

In the writer's experience, the cases of obstruction following some previous operation or the result of some type of internal strangulation have proven the most alarming as to the immediate outcome, with particular stress laid upon those cases following soon after some operation for a serious acute abdominal condition—such as late cases of acute appendicitis, gall bladder disease, etc. These have been the cases which came late for their first operation. The mortality in these cases is high because of the lowered resistance of the patient resulting both from the primary disease and the effects of the operation.

The diagnosis should be made early and the operation not unnecessarily delayed in order to keep the morbidity and mortality rate as low as possible. In the differentiation it is necessary to keep in mind such other acute abdominal conditions which may simulate acute intestinal obstruction, as mesenteric thrombosis, acute pancreatitis, etc.

The history should receive due consideration in the diagnosis of bowel obstruction. The knowledge of a more recent or

more remote laparotomy, a severe contusion of the abdomen, the history of a perforated gastric or duodenal ulcer would be invaluable evidence for a diagnosis of obstruction. Patients may recall incidents in their histories from which there may be surmised pre-existing peritoneal inflammation, and the logical sequence of bands and adhesions accounting for the present symptoms of strangulation. Attacks of diarrhoea, alternating with attacks of constipation, occurring in a patient of advanced years and declining health, excites at once the suspicion of malignant stricture or possibly torsion. Intussusception with its stealthy and indefinite symptoms would often escape recognition were we to disregard the predisposing conditions and the clinical history.

Five important symptoms must be considered in the diagnosis: 1. Fluctuation in the intestines above the seat of stricture due to accumulated fluid. 2. Increased and altered peristalsis, a symptom of much value and significance. 3. Vomiting, while generally not pathognomonic of obstruction, may under conditions become so. 4. Meteorism. 5. Pain.

There are certain more or less classical symptoms of intestinal obstruction which develop to a greater or less degree at some time in the progress of the disease, regardless of the cause, and to these we must attach the greatest significance. They are pain, vomiting, collapse, meteorism, absolute constipation as discovered by a second enema.

Pain is one of the most common symptoms of intestinal obstruction. Its intensity at the onset, depends upon the violence of the peristalsis, and the peculiar temperament and sensibility of the individual. Subsequently other factors come into play. Tension of the distended gut and injury to the peritoneum protract the suffering. Pain is of a cramping nature, colicky, twisting or binding. In cases where the obstruction is complete the pain is constant although liable to be periodic in its exacerbations. In cases where the obstruction is partial the pain is distinctly intermittent. That peristalsis is one of the essential elements of pain is proved by the fact that obstruction in the large intestines usually



excites but slight pain; whereas in the small intestines in which peristalsis is normal more active, occlusion or obstruction is followed by immediate and intense pain.

Vomiting is always an early and well marked symptom of obstruction from all causes, which bring about quick occlusion of the lumen of the gut, suddenly and sharply interrupting its normal peristalsis. From these chronic causes out of which gradually develop the final crisis of complete obstruction, vomiting may appear only as a late symptom. In certain forms especially in intussusception, there may be an entire absence of vomiting. It is a symptom dependent upon a number of different causes, the chief one of which is, however, the upward axial current established by the descending peristaltic wave. It occurs first as a reflex phenomenon, then as a result of increased intra-abdominal pressure from the overdistended gut and heavily laden intestines, and from the irritation and toxic effect of the toxic elements in the small intestines.

The secret of gastric, bilious and finally stercoraceous vomiting is perhaps the most important diagnostic feature of acute obstruction. It must be remembered, however, that it would be a mistake to wait in every case for fecal vomiting to occur before a laparotomy is undertaken, in order to save many of these patients. A conspicuous feature in the clinical picture of obstruction is the absence of stool and flatus. The arrest of bowel movement in mechanical ileus is due to the occlusion of the lumen of the gut at the seat of obstruction and to the paresis of the intestines below this point. Constipation is not a prevailing symptom in all forms of obstruction. In parietic obstruction there is consecutive retention of feces, yet the use of enemata may succeed in causing the discharge of some feces, so, likewise, in a number of cases obstruction due to intussusception the passage of fecal matter or gas is not completely arrested. Too much diagnostic significance should not be attached to constipation; at the most it expresses a prevailing feature of many different anatomical states.

The degree of distension depends upon

the completeness of the obstruction, the duration of it, and the position of the obstruction in relation to the length of the bowel. It is only present in that portion of the bowel above the seat of obstruction. The nearer the anus the obstruction is the greater the tumidity, a law which is the reverse of that applied to the vomiting. The site and development of the tumidity are valuable guides to the location of the obstruction. If the trouble is high, that is in the duodenum or beginning of the jejunum, the meteorism is confined to the epigastrium. If in the lower colon, we have at first a circumscribed area of tympanitis, which soon becomes general.

The manner of development of the meteorism has some diagnostic value; in obstruction by strangulation it develops passively, so to speak, without perceptible peristalsis; in chronic stenosis the meteorism is accompanied by violent peristalsis, both seen and felt.

#### TREATMENT

The time is too short to take up the treatment for obstruction due to all causes, but an outline of the treatment for those cases which give us the most grief might be more in place at this time. There are some things which the manner of death teach us. It is of much greater concern to us when brought face to face with a dying man, to know how he may be rescued from his perilous position than to consider how his obstruction came about. Some of these patients die from primary shock of obstruction. These deaths come early. Some die from starvation, all urgent symptoms subsiding and vomiting only occurring when food is taken. Most die from toxæmia from the poisonous matter contained in the bowel above the obstruction or from the products of gangrene and some die from the peritonitis arising at the point of injury. I think these pictures cover pretty thoroughly all the types of death in obstruction of the bowel. Shock, toxæmia, starvation, and peritonitis. If a patient can be reached early and the abdomen opened, the cause may be reached; i. e. the intussusception pulled apart, or the inflamed appendix removed, and the septic area drained, the hernia reduced; or the volvulus re-ro-

tated, the loaded bowel emptied and the patient may improve and be none the worse for his experience. But if the case is neglected for twenty-four, thirty-six, or forty-eight hours and during this period frequent attempts are made to purge the patient, the toxæmia becomes of a nature that will rest in the patient after the cause of the toxæmia is removed. I mean by this if the patient has peritonitis and all the pus from the abdomen is carefully removed before the patient's blood has become loaded with toxins, the patient has a good chance to recover. If, however, the patient's blood has been loaded with toxins, the cure of peritonitis will not result in saving the life of the patient. Also, when a patient has the lumen of his bowel shut off and the vomiting of obstruction sets in, he will recover promptly if the obstruction be removed at once and the lumen reopened. The contents of the upper bowel, not long delayed in its passage, will pass on down the bowel and out without causing trouble. But if its toxic contents be retained for hours and hours in the bowel, passed forward by peristalsis, and drawn backward again by vomiting, the bacteria increase enormously, and poisonous gases and toxins develop. The patient's blood becomes loaded with them. Now release the obstruction—a flood of poisonous matter is pushed forward into the empty, hungry bowel beyond. It at once takes it up and the patient dies from rapid acute toxæmia.

In the so-called chronic obstruction where starvation is slowly causing the patient's death, an anastomosis will quickly cure the case, and the death rate is not so high. In the cases associated with peritonitis where sepsis from peritoneal absorption is the predominating factor, drainage will end the matter. It is the other class of cases, the case that has an occlusion at a definite point with fecal contents and gas in the bowel above and collapse below that comprise the greatest number of cases recorded as intestinal obstruction and in which the death rate is greatest. In these days of surgical activity, a preceding surgical operation is a common cause of obstruction. It is found after resection of pel-

vic viscera, a pus tube or gonorrhoeal uterus. It is common after appendicitis, the bowel in the case of the appendix or the Fallopian tube forming adhesions to the inflamed organ or attaching itself to the stump after removal. Intussusception is a most deadly form of obstruction and while ranking below the others in frequency of occurrence, its percentage of deaths is very much higher. Close to it in danger and more as to frequency, is volvulus. Much more frequently than either and but little less deadly in effect is strangulated hernia. Similar surgical complications are quite common to all these conditions. All present the picture of intestinal obstruction, vomiting, distension, no bowel movement—all have the dangerous possibility of gangrene.

#### MAKING THE DECISION TO OPERATE

When a reasonable amount of cathartic has been given—which is a mistake—and supplemented by two enemas without result other than to cause vomiting, and when to the above is added rumbling noises from gases in the intestines with bowel distension and without passage of gas from the anus an operation is indicated.

#### RESECTION

If the damage to the bowel at the point of obstruction has been so severe as to make necessary resection, the bowel should be emptied by cutting off the bowel above the injury and inserting the Paul, Moynihan, or some other tube for the purpose of emptying the bowel. The bowel can drain empty through the tube while resection is being done. Resection for gangrene or perforating slough must be immediate, no matter how bad the condition of the patient. When, however, the obstruction is one of contraction of inflammatory adhesions it is a damage that will improve with waiting, if an outlet is arranged above the point of obstruction. In these late cases of obstruction, the patient is usually in an extreme condition. Death threatens. We must do as little as will save the patient at the time and get out as soon as possible, leaving cure to a later date. The mistake is usually in doing too much. Gangrene must always be resected at once, but in the absence of such urgent need it is better to open the bowel above



the obstruction, empty the contents into the wash bucket by an intestinal tube. Drain by means of a tube or through an enterostomy and in very desperate cases also a jejunostomy, and permit the patient to throw off his toxæmia before going further.

#### SOME GUIDING PRINCIPLES IN THE TREATMENT

While the diagnosis is being made, gastric lavage should be instituted to remove some of the regurgitated toxins and to avoid pneumonia and drowning during an anesthetic.

Salines should be administered to supply the chlorides and fluids lost by vomiting.

Glucose to combat starvation in solutions of five per cent with or without sodium carbonate, two per cent.

Local anesthesia employed in many of the desperate cases, where possible, otherwise nitrous oxide and oxygen gas. In some of the cases ether is desirable in order to secure the necessary relaxation of the abdomen. Transfusion of blood aids in saving some of the very ill patients. Enterostomy will reduce the mortality. It may even be necessary in the first twenty-four hours, if there is but little distension. It should never be omitted in well developed cases with great distension. The use of long perforated rubber tube inserted per rectum while the abdomen is opened is of advantage in obstruction from kinks of the sigmoid. In volvulus of the sigmoid excision gives the best results, even if it can be untwisted and the gut is in good condition, as recurrence is the rule.

In intussusception in children excision with anastomosis will kill. By introducing water into the rectum the intussusception can usually be easily reduced with moderate manipulations under the eye with the abdomen open. Failing in this, excision with both ends left out through the skin, gives the best chance.

In peritonitis there is a combination of toxæmia from infection and paralytic ileus. Jejunostomy may be of some benefit, especially if the peritonitis is not generalized.

Case I. Female, Age six years. His-

tory of appendicitis prior to this illness: Was sick one week, three months ago with the first attack of appendicitis. Was sick one week with present illness.

Patient brought to the hospital vomiting; pain in right lower quadrant; abdomen distended moderately and rigid on right side. Abdomen opened in right rectus muscle and two rubber tubes inserted into abdomen for drainage of pus in right lower quadrant of abdomen, which was the result of a perforated appendix. Ten days later patient developed symptoms of intestinal obstruction. Abdomen was opened and bands of adhesions found constricting the small gut. These were detached and an enterostomy tube was inserted proximal to the site of obstruction. Patient made a good recovery.

Case II. Female, Age 27; married; two children, one five and the other two years old. In 1921 was operated for an extra-uterine pregnancy, ectopic pregnancy occurring in the right tube. The right tube was removed at the time of this operation and a great deal of clotted blood removed from the pelvis and between the loops of the small intestines. Patient made a good recovery after this operation and gave birth to her two children mentioned in the history. In June, 1927, this patient was brought to the hospital with all the symptoms of bowel obstruction, after having been ill for thirty-six hours. Upon opening the abdomen, a loop of the ileum was firmly bound down by a band of adhesion extending from this loop and attached with its other end to the base of the mesentery. Intestines were very much distended and discolored but not gangrenous. The attachment of the adhesion was released, patency of the bowel established, and the abdomen closed without drainage. The patient went on to complete recovery.

Case III. Female; married; 64 years old; mother of eleven children. History of gall bladder colic for many years. Present attack began six days before admission to the hospital. Onset with symptoms typical for gall stone colic. Findings six days after onset of this illness: Temperature 102; pulse 100; leu-

cocyte count, sixteen thousand; with polymorphonuclears 89; patient vomiting; no bowel movement for three days after repeated enemas; abdomen very much distended, with a great deal of tenderness in the upper abdomen; some indican in the urine; preoperative diagnosis of gall stones with infected gall bladder and pathology secondary to the infected gall bladder.

Operative findings: Gall bladder very much enlarged with a thickened and discolored wall. This organ filled with pus, a tarry bile, and large calculi, with a stone impacted in the cystic duct. The most interesting finding was a rather firm adhesion of the hepatic flexure of the colon and also of the pylorus to the infected and enlarged gall bladder. The large intestines proximal to the adhesions and the small gut were found very much distended, which condition likely would have gone on very soon to one of complete intestinal obstruction. In the case the gall stones were removed, the gall bladder drained, and the colon and pylorus released from their attachments to the gall bladder and a flap of omentum fixed over the site of attachment of the intestines to the gall bladder. This patient was operated two months ago and up to the present time is reported to be in good health.

Case IV, male, age 51. History of recurrent appendicitis, but never confined to bed on account of the previous attacks. Had been sick for five days when admitted to the hospital. Temperature, 98; pulse, 100; leucocyte count, 19500; polymorphonuclears, 71; patient vomiting, dark brown fluid of a fecal odor; abdomen distended, slight rigidity on right side. Abdomen opened under local anesthesia. Findings as follows: Wine colored fluid in the abdomen; intestines distended and of a dark color; mesentery extensively thrombosed. In this case there was a pathology that was extremely bad on account of thrombosis, and damage to the bowel. A high enterostomy was advised but refused and the patient died three days later. At autopsy the small bowel was found perforated in many places due to the thrombosis and secondary necrosis.

Case V. Miss K. R., single, age 36, mother died of diabetes. No cancer or tuberculosis in the immediate family. Patient began to menstruate at the age of thirteen years. Has had a good deal of dysmenorrhea all the time since her menstruation began. Periodically complaining of dysuria and frequent micturition, especially at the time of the menstrual periods. Patient was operated at the age of fourteen years for a retroversion in the hopes that this operation would offer relief from dysmenorrhoea. This it failed to do. The Alexander operation was performed for the correction of the retroversion.

March 15, 1928, a laparotomy was advised for a very obstinate constipation which frequently was the cause of a marked distension of the intestines; and was advised for a relief of symptoms resulting from suspected long standing pelvic adhesions. A laparotomy revealed the following condition: Uterus smaller than the usual, a virgin uterus; ovaries both normal except the one on the right showed moderate sclerosis; both Fallopian tubes normal; a loop of the ileum firmly adherent to the upper and posterior surface of the uterus. This firm adhesion involved a section of the ileum one and one-half by two inches in area. This is the pathology which resulted in almost an entire occlusion of the gut.

Operation performed as follows: Section of ileum adherent to the uterus was released including the intestinal wall the serous covering of the uterus in order to avoid a rent into the lumen of the bowel. A supra-vaginal hysterectomy was also done in the desire to guard against any future adhesions and give relief from the severe dysmenorrhoea. This patient made a good operative recovery with no undesirable symptoms manifested since. It is quite likely that the adhesions of the small intestines to the body of the uterus existed before the Alexander operation was done on this patient and that bringing the uterus into the ante flexed position made matters worse rather than better.



## Some Experiences in Bronchoscopy and Esophagoscopy—Foreign Body Case Reports

SAM E. ROBERTS, M.D.

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The primary lesson to be learned in endoscopy (bronchoscopy and esophagoscopy) is that it is not a one-man job. No place in medicine or surgery is team work more important. In my opinion, no one individual is so expert that he can afford to risk the life of his patient by working either alone or with untrained assistants.

Until about two years ago I did my endoscopic work with assistants chosen at the time of the operation depending upon the availability more often than the fitness of the man for the work. This is not satisfactory from any point of view.

At present, we have a bronchoscopic team composed of Drs. J. L. Myers, L. V. Spake, O. S. Gilliland and myself. Each man is trained in this work. When a foreign body patient is admitted each member of the team is notified. An individual examination is made followed by a consultation. Unless the patient is in an extreme condition demanding immediate relief he is put to bed for twenty-four hours rest. This, especially should be done when the patient has traveled some distance.

The common conception that all these cases are emergencies is erroneous. One should not be hurried into action even by the appeals of the physician accompanying the patient or by the patient's relatives.

On admission a careful history should be taken. With very young children there is always some doubt as to whether or not there was an actual foreign body either swallowed or inspired. Symptoms at the onset and immediately following are most important. This should be followed by a complete physical examination. If a foreign body is present in the lower air passages certain chest findings are important, such as: diminished amount of air or complete absence of air entering the affected lung; exaggerated breath sounds on the opposite side of the chest. There is nearly always a bronchitis pres-

ent. Where the foreign body is an organic substance, such as a bean, peanut, or the like, a septic bronchitis is usually found. Owing to the extra amount of secretion there is the asthmatoïd wheeze and subglottic laryngitis.

The patient should next be sent for an *x-ray* examination. The findings are of definite value—whether the foreign body is opaque or non-opaque. Localization, of course, is not difficult when the body is opaque.

Wm. F. Mangus has described the following radiographic findings when the foreign body is plugging a bronchus:

1. Increased transparency over the entire affected side.
2. Depression of the diaphragm on the affected side.
3. Displacement of the heart and mediastinal structures away from the affected side—in short, an acute obstructive emphysema.
4. Increased density in the lung shadows on the opposite side due to retained secretion.

It should be emphasized that the inflammation at the site of the foreign body is the essential factor in the production of this acute obstructive emphysema and not necessarily the foreign body alone.

### THE BRONCHOSCOPIC TEAM

It is highly essential that all members of the bronchoscopic team keep constantly in practice. The occasional operator in this field is, I believe, more dangerous than the occasional abdominal operator. It is true that even in many larger hospitals there is not a sufficient number of cases to keep the men in training.

This problem may be obviated in two ways:

1. By the use of dogs under anesthesia by the Jackson method: i. e., one-eighth grain of morphine per pound weight one hour before the operation and cocaine (20 per cent) in the pharynx, larynx and bronchial tree immediately before.
2. By use of cadavers prepared with Hewson's solution.

We have found the use of dogs much more satisfactory. We have regular meetings of the bronchoscopic team where each man does a certain number of difficult extractions. When a patient is ad-



mitted and a difficult problem is presented the problem is duplicated on the dog and each man present works out his individual technique for the removal.

For example: If a child is admitted with a bean in the right main bronchus a small sized dog is anesthetized by the Jackson method and a bean is placed in the exact location. The case is studied from every possible angle such as the best type of forceps to be used; whether there is a tendency to displacement; how much grasping pressure may be used, etc. In other words, at this time we attempt to determine the safest, quickest, and surest method of extraction with the minimum amount of danger to the patient's life. I know we have shortened our operative time and I feel very sure, in one case at least where a difficult problem was present, we saved a life by a method worked out on a dog, the evening before.

We have four men in our bronchoscopic team (Illustration No. 1 and 2). One holds

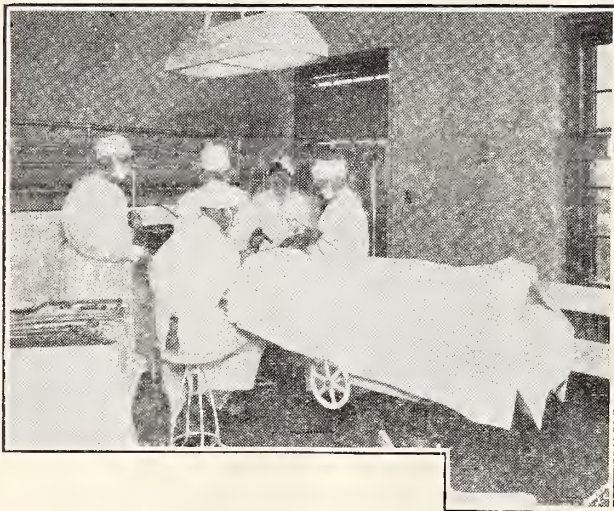


Illustration No. 1—Relative Position of Operators

There is some difference of opinion as to these positions. We have found the above to be the most practical.

the head in proper position; one handles the instruments; one the suction and sponges, and one is at the scope. The positions are almost of equal importance. If the man holding the head allows the patient to get into a wrong position at a critical time, or the man in charge of the instruments does not have the proper forceps ready to start down the tube when the foreign body has been centered, ready for grasping, failure may result. Much, of course, depends upon the man

at the scope—his judgment, finesse and accuracy.

#### INSTRUMENTARIUM

Complete equipment ready at all times is absolutely indispensable. (Illustration

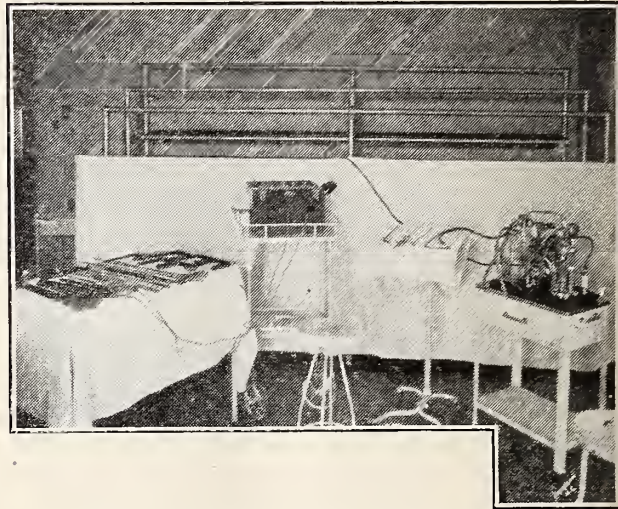


Illustration No. 2—Relative Position of Equipment

Tubes and forceps should be near operator's right side where they can be handed to him with the least confusion. Suction on left with long enough rubber tubing to be passed back of operator and over his right shoulder.

No. 3). Duplicates should be available for the more commonly used instruments. Frequently replacements are necessary. Slightly damaged or rusty instruments should never be introduced into either an air or food passage. A rusty instrument

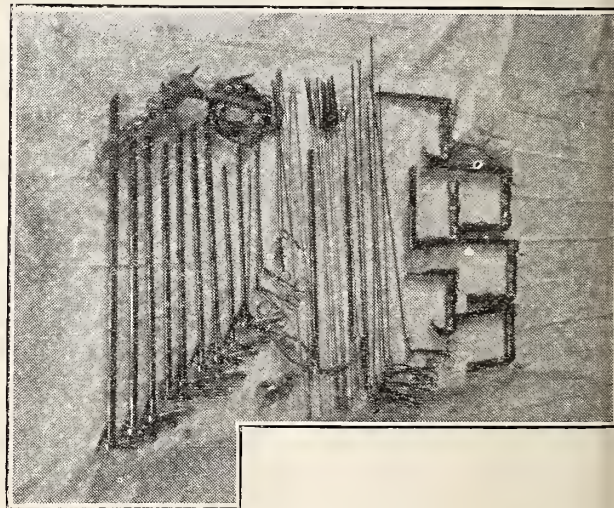


Illustration No. 3—Instruments

Scopes, tubes, forceps, dilators, sponge carriers, etc.

Upper left: Directoscope.

Upper right: Tracheotomy set which should always be at hand for emergencies.

may break and the problem would be changed from one to two foreign bodies. A forceps out of adjustment may fail to



hold the foreign body during its removal.

#### ANESTHESIA

For children under the age of six years no anesthetic whatever is used where the foreign body is anywhere in the lower air passages. When the foreign body is in the esophagus and respiratory difficulty is not present a light ether anesthetic may be given although as a rule it is not necessary. For children six years or over a small dose of morphine is given 45 minutes before the operation. In adults the same rule applies to foreign bodies in the lower respiratory tract. In addition to morphine, usually one-fourth grain an hour before, and a small dose 15 minutes before the operation. Cocaine is used in the pharynx, larynx and bronchial tree, applied on swabs.

In esophageal foreign bodies a general anesthetic may be used where no respiratory difficulty is present if deemed advisable although as stated above it is not usually necessary.

#### CASE REPORTS

I will report briefly a number of cases, detailing only the essential facts and showing the *x*-rays where important.

Case No. 1—See *x*-ray No. 1.

Baby F.—Age: 2 years.

Referred: Dr. G. Leonard Harrington.

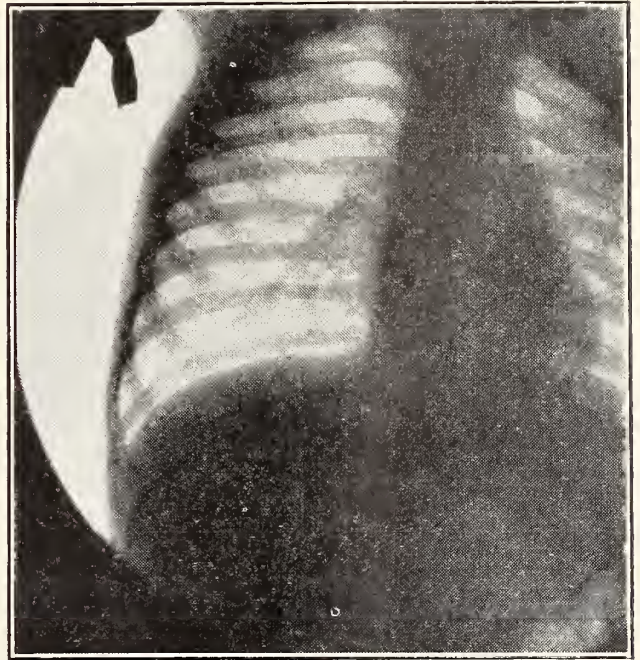
One day before admission patient inspired a piece of peanut; at that time she had a coughing spell. A little later she developed wheezing during respiration. The parents consulted their physician, Doctor Harrington, who referred the case to the hospital. The child did not seem to suffer any discomfort other than this; her appetite was good and she had slept well. On admission a distinct asthmatic wheeze was present and practically no air was entering the right lung.

Radiograph showed typical pulmonary emphysema on the right; heart displaced to the left and separation of the ribs on the right.

A four m.m. tube was used; at the bifurcation a large amount of mucus was encountered. Aspiration and swabbing was necessary. The peanut

forceps were used. On first introduction only a part was removed, thus a second

introduction was necessary for the remaining portion. Next morning, 24 hours after extraction Doctor Neff reported air entering both lungs. Slight febrile reaction followed but subsided three days



CASE NO. 1

Peanut in right main bronchus. This radiograph shows an extreme condition. Right side of heart on level with the spinal column and pushed to the extreme left. Right ribs widely separated. Due to pulmonary emphysema increased lung visibility right.

later when the patient left the hospital.

Note: Too much grasping pressure was used and the peanut was broken. This made a second tube introduction necessary.

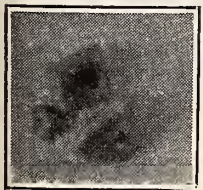
Case No. 2—See *x*-ray No. 2.

Baby R.—Age: 2 years.

Referred: Dr. Frank Neff.

The patient was admitted a desperately ill child. Had inspired a peanut in the right main bronchus three weeks previously. Coughing, wheezing, and cyanosis immediately followed and had persisted. Dehydration and distinct air hunger were present; no air entering the right lung.

*x*-Ray report: dorsal position showed increased right lung visibility; elevation of ribs symmetrically on the right; right diaphragm depressed; heart displaced to left; right side of heart at right spinal border (increased intercostal space). Left lung in contrast showed slight cloud and



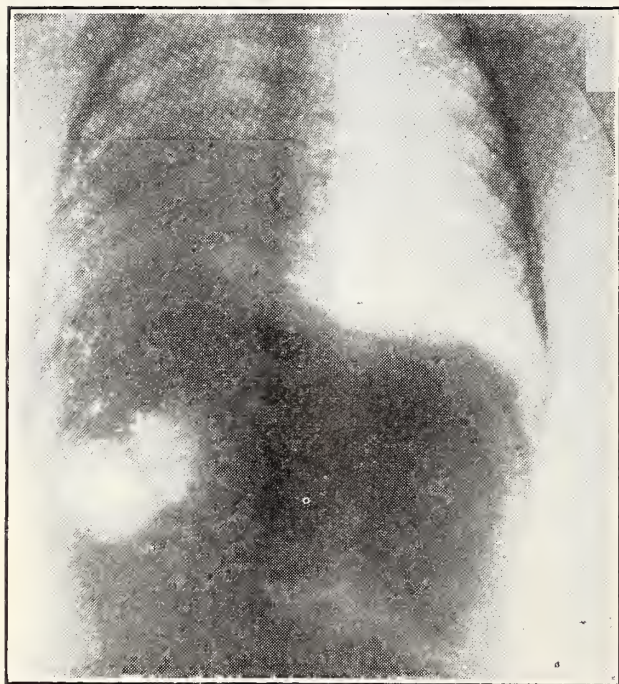


lessened sectional area. Conclusions: obstructive emphysema and foreign body present in the right bronchus.

Even though the case seemed desperately in need of immediate relief the operation was postponed twenty-four hours during which time the dehydration was partly overcome and the patient was in much better condition the following morning.

A four m.m. tube and peanut forceps were used; edema and pus were encountered at the glottis and were present throughout the entire right lung. With each advance of the scope aspiration was required. The peanut was found in the right lower main bronchus and when grasped by the forceps was macerated.

A little over one-half the peanut came out when the forceps were first used; the remaining portions so far as could be de-

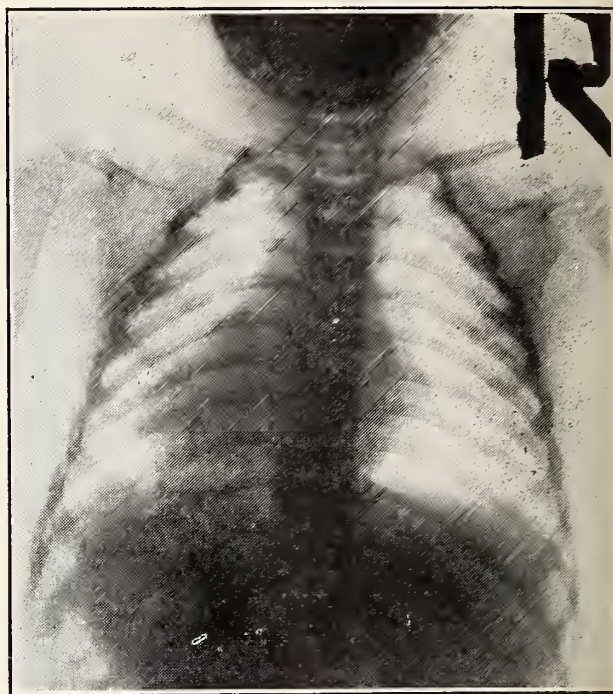


#### CASE NO. 2

Peanut in right main bronchus. Right lung visibility increased; left lung in contrast shows cloudiness. Obstructive emphysema due to foreign body in right bronchus. (Due to faulty technique this is not a good radiograph but the only one available.)

terminated were removed by aspiration. The relief was quite marked. We expected a tracheotomy would be necessary and preparations were made for a bedside emergency. This, however, was not necessary and the patient left the hospital four days after admission.

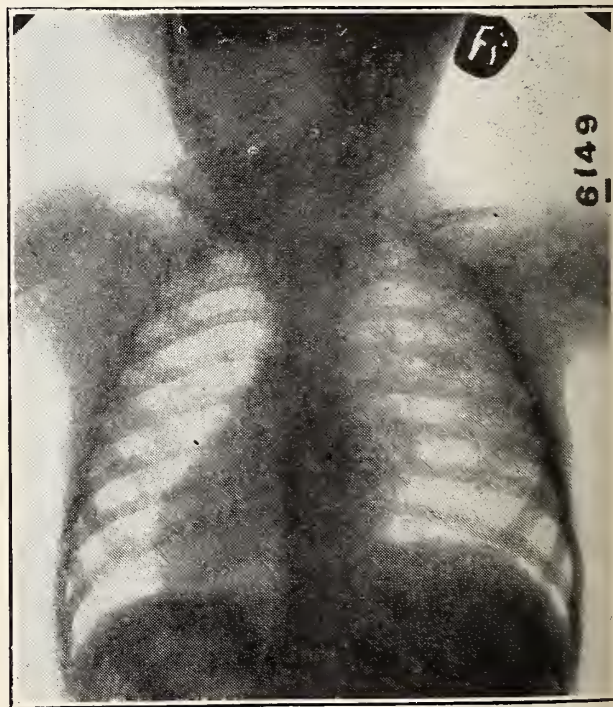
Problem: 1. Long sojourn of the foreign body which made it soft and friable.



#### CASE NO. 2

X-ray taken one month later shows both lung areas normal.

2. General condition of patient made a bad surgical risk.



#### CASE NO. 3

Large bone button in upper esophagus. Infant 18 months.

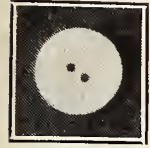
Case No. 3—See x-ray No. 3.

Baby W.—Age: 18 months. .

Ref: Dr. O. Liston, Oak Grove, Mo.



Three days before admission the patient picked up the button from a sewing machine and swallowed it. The child could not take food, each attempt produced vomiting. No other discomfort was apparent.



About  $\frac{1}{2}$   
Actual Size

x-Ray showed a large button occupying a portion level with the first and second dorsal vertebrae parallel to the transverse diameter of the chest. No evidence of pulmonary involvement.

The button was removed through the small esophagoscope grasped with the Mathieu forceps.

#### Case No. 4.

Physician—Age: 50 years.

Ref: Dr. H. E. Yazel.

This patient a "hunchback", without teeth, had swallowed a sharp bone from a T-bone steak three hours before admission. The bone was lodged in the upper thoracic region of the esophagus.

Owing to the condition of the spine he was unable to lie on his back and for the same reason a rigid tube (esophagoscope) could not be passed. The only method available was the probang. I explained to him the dangers in the use of this instrument where a sharp foreign body was present, and he accepted the responsibility.



No view could be obtained of the foreign body by the direct method. The bone was removed easily and there were no after complications. I do not know of a similar case having been reported in the literature. The method adopted seemed to be the only possible means of extraction.

Problem: Hunchback who was unable to raise chin more than two inches from the sternum.

#### Case No. 5.

Baby T.—Age: 21 months.

Ref: Dr. W. E. Mowry, Salina, Kans.

Twenty-four hours before admission the child had swallowed a hook from a hook and eye set. Severe spasms, cough-

ing, choking, cyanosis, and wheezing followed.

Chest examination showed wheezing and whistling sound throughout both lungs. Percussion note was clear; respiration rate 40 per minute.



x-Ray report showed a dress hook at the level of the sixth cervical vertebra mid-line, and in a position ordinarily occupied by a foreign body in the esophagus.

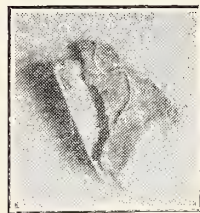
Owing to the respiratory effort an immediate operation was deemed advisable. At 6 p. m. following admission the foreign body was removed from the larynx. The infant laryngoscope and Mathieu forceps were used. The respiratory effort became immediately less labored and the rate dropped to 26 the next morning. The child left the hospital at the end of the second day after admission.

#### Case No. 6.

Mrs. B.—Age: 30 years.

Chicken bone was lodged in upper thoracic region of the esophagus for 5 days. The patient was extremely nervous and was unable to take solid food. Some regurgitation even of liquids.

A seven m.m. tube and alligator forceps were used. Ether anesthesia was administered because of the extreme nervousness. The bone was found cross-wise with the point towards the left. By manipulation with tube and forceps the blunt end was



pushed downward, the point grasped and the bone removed. By use of powdered aspirin the patient was able to take solid food the following day. Recovery was complete.

#### Case No. 7.

Baby A.—Age: 3 years.

Ref: Dr. Ellis Starr, Concordia, Kans.

Three days before admission the patient had a choking spell while eating bits of raw potato; he coughed and vomited.



Some potato was vomited but a peculiar noisy respiratory breathing persisted and the child was fretful.

Auscultation: almost complete absence of breathing sounds on the left. This extends from the apex to the base. Expiratory wheezing was heard throughout the entire left lung. The right side showed a normal inspiratory breathing but expiratory wheezing was marked.

*x-Ray*: showed both lung fields with reduced translucency especially on the right. Diffuse exudate appeared to be distributed throughout the entire right lung field.

Owing to a recent bronchoscopy elsewhere it was decided to wait several days before a second attempt. One week after admission a four m.m. tube was used and both bronchi explored. Only small bits of potato were found and removed, more from the left lung. Suction was used frequently and in the suction bottle there were found small bits of potato. Lugol's solution was used to stain the potato substance so they could be seen more readily; this materially helped. A tracheotomy was done several hours after the bronchoscopy. This offered additional drainage for the lungs. The child had a rather stormy convalescence but left the hospital completely recovered at the end of ten days.

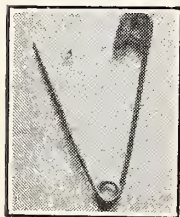
Case No. 8—See *x-ray* No. 8.

Baby M.—Age: 9 months.

Referred: Dr. C. M. Fullenwider, Muskogee, Okla.

The patient swallowed an open safety pin five days before admission. Difficulty in swallowing was manifest from the beginning although the child was able to take and retain some nourishment.

*x-Ray* showed a large sized open safety pin with the point up, in the esophagus.



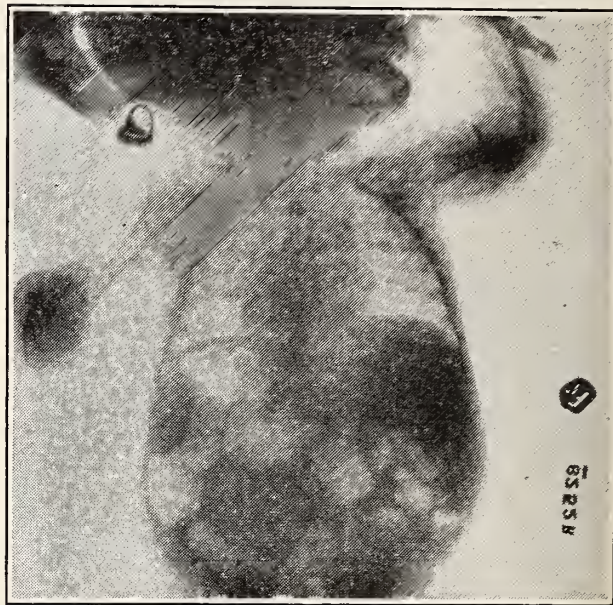
The lower border of the pin was on a level with the sixth dorsal vertebra.

Under general anesthesia the ring of the safety pin was grasped with the rotation forceps and carried on into the stomach. During the rotation the

safety pin was dropped from the forceps and lost in the stomach. The child was

returned to bed and the pin was recovered in the stool 48 hours later. She left the hospital the following day completely recovered.

*Comment*—There are ten or twelve different recognized methods for the removal of open safety pins from the esophagus. If the point of the pin can be



CASE NO. 8

Open safety pin in dorsal region of oesophagus.

seen, grasped, and shielded in the lumen of the tube it is the most ideal method of extraction. The next method of choice is, in my opinion, rotation of the pin within the stomach. The spring or ring is grasped and the pin is pushed downward into the stomach where, by manipulation of the forceps, the pin turns over and the point is then downward instead of upward. It is partly drawn into the tube and the extraction is made with the point trailing.

Should the pin be lost in the stomach as in the above case it is usually passed through the bowel without any harmful effect. In my opinion, it is safer to put the pin in the stomach than to make too energetic and often misguided attempts at extraction. It is better to have a well patient even though the method may not be so spectacular.

Case No. 9—See *x-ray* No. 9.

Baby: H.—Age: 14 months.

Referred: Dr. Frank Neff.

The patient had inspired an open



safety pin in the larynx and upper two rings of the trachea 12 weeks before admission. A diagnosis of diphtheria had been made and repeated doses of anti-



CASE NO. 9

Open safety pin in trachea and larynx three months. The keeper was between cords and the spring extended well down into the trachea.

toxin had been administered. An immediate low tracheotomy was demanded to relieve the marked dyspnea.

After doing the tracheotomy a curved forceps was passed upward, the spring was grasped and the safety pin was removed through the tracheotomy wound. The tracheotomy tube could not be removed for ten days because of the swelling and ulceration caused by the long sojourn of the foreign body. The child made complete recovery but a voice defect still exists, owing to cord ulceration.



Case No. 10.

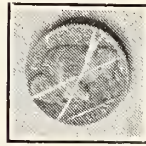
Baby F.—Age: 2 years.

Referred: Dr. Spake, Kansas City, Kans.

Three days ago while the baby was playing the mother noticed that he suddenly choked and coughed and has been doing this since. The patient took little food and only a small amount of liquid.

The x-ray showed a coin just above the

cricopharyngeus muscle, slightly to the left.



next day.

The small esophagoscope was used and the coin located and removed with the Mathieu forceps. The patient recovered completely and left the hospital the

Case No. 11.

Baby M.—Age: 2 years.

Referred: Dr. Chambers, Centerton, Ark.

Three weeks ago while playing the child had a screw in his mouth. According to the father's statement the patient had a severe choking spell and "nearly choked to death" and was very blue. Since that time at intervals the patient appeared fairly comfortable but has had similar attacks. He has had more cold and a temperature of 101.4° and seemed much worse the last few days.

x-Ray showed a screw about three-fourths inch long occupied the left main bronchus with the point up.

The following day a bronchoscopy was done. The left lung was completely filled with pus. A great deal of difficulty was encountered in locating the foreign body. After it was located the side-biting forceps were applied and the foreign body was removed up to the bifurcation. At this point the screw slipped from the forceps. After several unsuccessful attempts it was decided to postpone any further procedure for a few days. The patient got progressively worse and died the fourth post-operative day.

The child was admitted to the hospital during the month of February with what appeared to be "flu"-pneumonia. It is, of course, probable that this was secondary to the foreign body. A severe hemorrhage occurred just before death which greatly resembled the hemolytic strep pneumonia terminations.

Case No. 12.

Baby Y.—Age: 4 years.

Referred: Dr. G. R. Hastings, Dakin, Kans.

Three days before admission the child swallowed a sewing machine bobbin. At



the time she coughed and strangled but has had no trouble with respiration since and is able to take liquids without vomiting.

*x-Ray*: a large metal foreign body the shape of a flat spool occupied a position in the esophagus at the level of the seventh cervical vertebrae.

Because of the fact there had been no respiratory difficulty the child was given a light anesthetic. The Jackson laryngoscope was used and the foreign body was grasped with Mathieu forceps and removed. There were no after-complications and the child left the hospital the following day.

This case presented no problem whatever. The remarkable feature was the child's ability to take and retain nourishment around such a large esophageal foreign body.

Case No. 13—See *x-rays* No. 13.

Baby S.—Age: 9 months.

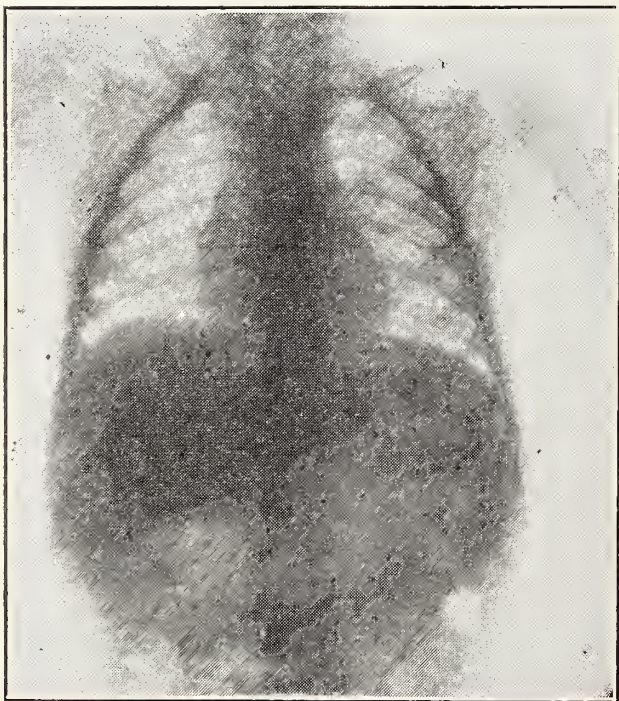
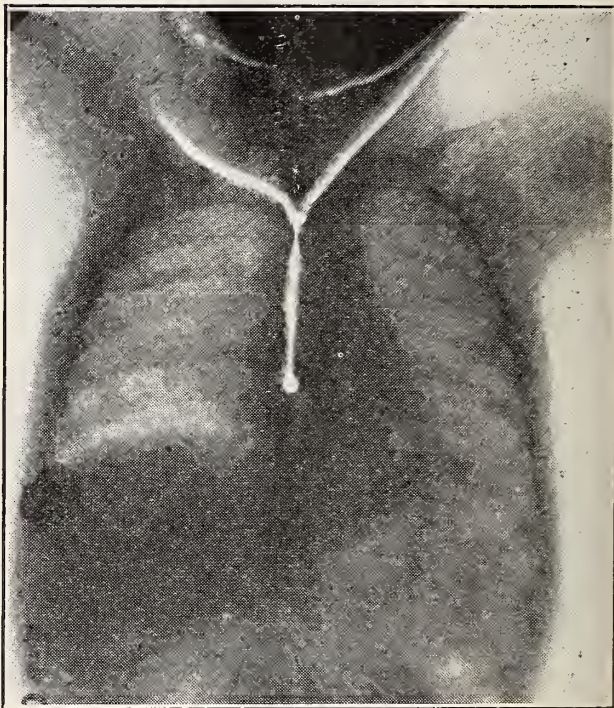
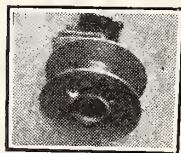
Referred: Dr. M. K. Thompson, Muskogee, Okla.

Five days ago the patient was seen putting something in his mouth. On exam-

saw something resembling a bean. At this time the child took a deep breath and apparently inspired the supposed bean. Since then he has had severe coughing attacks and some difficulty in breathing.

Chest examination showed diminished excursions in the right side of the chest. Diminished respiratory sounds were present on the right. The radiograph findings confirmed the physical findings. No opaque body was seen.

Two days after admission, through a 4 m.m. tube, a large bean was removed from the right main bronchus. A trache-



CASE NO. 13

Bean in right bronchus removed ten days ago, *x-ray* shows both lungs clear.

ination of his throat, by the mother, she

CASE NO. 13

Bean in right main bronchus. This shows a mild pulmonary emphysema due to partial plugging. Ribs more separated on right. More clouding of lung on left but there is some on right due to retained secretion.

otomy was necessary 12 hours later and the tube was removed the fifth day. The patient left the hospital on the ninth day completely recovered.

*Comment*—"Beans are, perhaps, the most dangerous of all foreign bodies. They are usually, as in this case, aspirated during play, not while eating—hence, they are dry and uncooked. Dau-



ger arises from two factors:

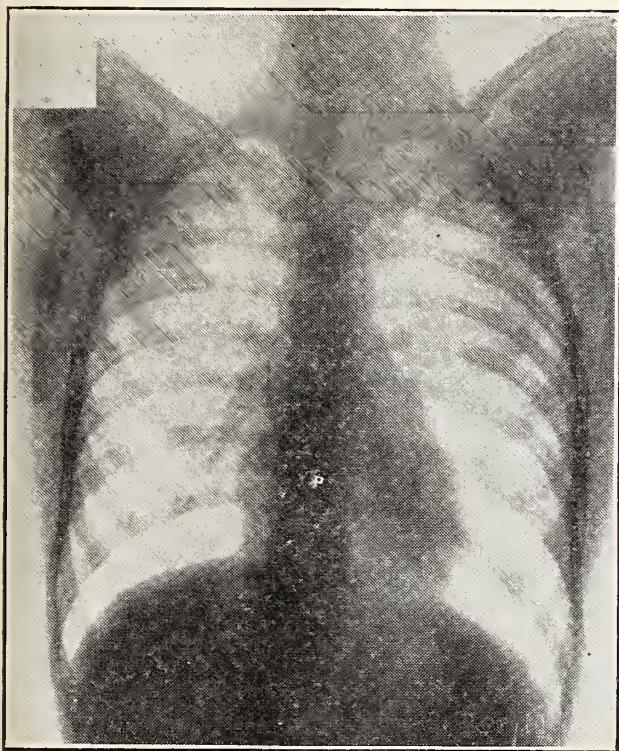
1. Enlargement of the bean by swelling.
2. Violent laryngotracheobronchitis from some, as yet unknown quality, possessed by beans, peas, peanuts, maize, and in fact most, if not all, vegetable substances."

Case No. 14—See x-ray No. 14.

Boy—Age: 17 years.

Referred: Dr. Fullenwider, Muskogee, Okla.

Three days before admission the patient was doing some upholstery work and holding tacks in his mouth before



CASE NO. 14

Upholster's tack in right bronchus. No other pulmonary involvement.

using. He had a slight irritation in his throat and started to cough. This was followed by severe choking attacks and some aphonia. He had only mild dyspnea which persisted to a limited degree. The cough has continued with some mucopurulent secretion. One unsuccessful bronchoscopy was done. The

right bronchus was found filled with pus. He was returned to his room and one week later the tack was removed through



a 7 m.m. tube by using the Tucker tack forceps. The patient was dismissed three days later.

Note: If an unsuccessful bronchoscopy is done another bronchoscopy should not be performed until one week has elapsed unless there is a definite emergency.

Case No. 15.

Baby F.—Age: 1 year.

Referred: Dr. Damon Walthall, Kansas City, Mo.

Eight hours before admission the child swallowed an open safety pin and vomited several times. Much mucus was present and the patient had several convulsions. Bread and pancakes were given in an effort to dislodge the pin.

Roentgenologist reported a safety pin



in the larynx. This was found, however, not to be correct at the time of operation.

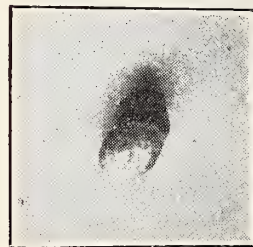
Through the direct infants' laryngoscope the safety pin was located in the right pyriform sinus and removed with the Mathieu forceps. The patient left the hospital the following morning fully recovered.

Case No. 16—See x-rays No. 16.

Baby T.—Age: 22 months.

Referred: Dr. Frank Neff; Dr. Chas. McNeal, Sedalia, Mo.; Dr. A. L. Walters, Sedalia, Mo.

Ten days ago child was eating peanut candy and had choking spell, vomited several times, coughed frequently and became cyanotic. Temperature began the following day and continued. There were no subsequent attacks similar to the first. A hacking cough continued; appetite was poor from



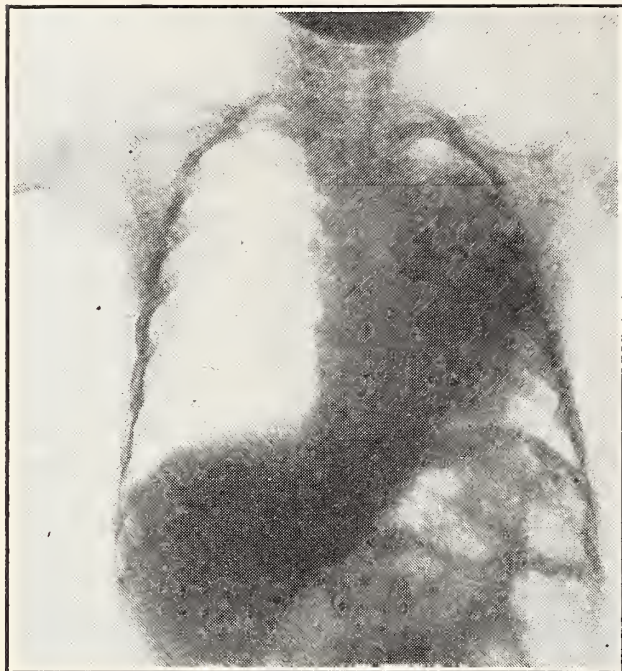
the time of the accident.

Chest examination showed decreased excursions on the left area; dullness over the left upper part of the lower left lobe of the lung. Signs pointed to pneumonic consolidation of the lung in that area.

x-Ray showed calcified mass evidently a small piece of rock lying in the left



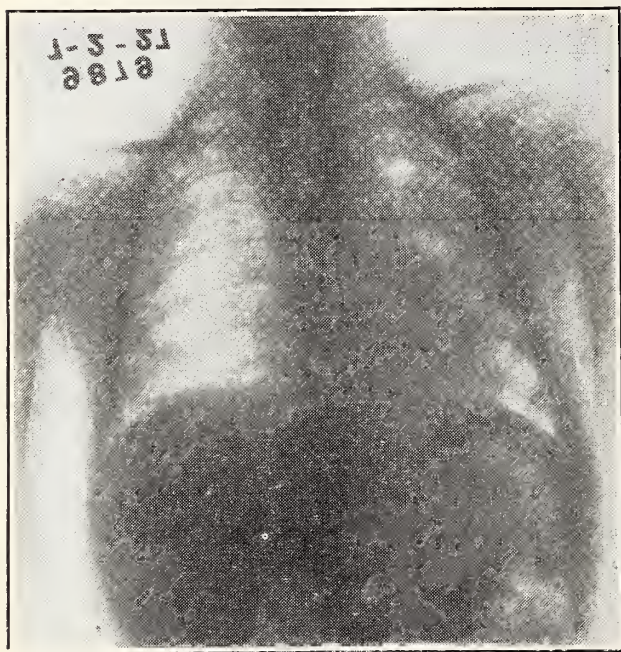
bronchus. Diffuse opacity of the middle lung field extending out from hilus to



**CASE NO. 16**

Anterior view of stone in left bronchus. Left lungs show a pneumonia due to foreign body.

periphery suggesting a pneumatic condition from the presence of the foreign body in the left bronchus.



**CASE NO. 16**

Anterior view about ten days after removal of the stone. Pneumonic condition has disappeared.

Because of the history we, of course, suspected that the foreign body was a peanut. The radiograph showing an

opaque body disproved this original opinion. On admission the child had a temperature of 102.2°.

A rock the size of a good big bean was removed with the peanut forceps. Twelve hours later difficult breathing occurred and it was necessary to do a tracheotomy. The tracheotomy tube was removed on the sixth day and the child left the hospital on the seventh day. The temperature subsided the fourth day and continued practically normal.

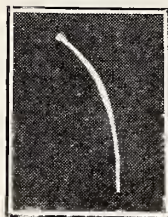
#### Case No. 17.

Man—Age: 24 years.

Referred: Dr. Morris Clark.

While eating fish at lunch the patient felt a bone engage in the left side of his throat. He made an attempt to remove this with his finger which caused vomiting. The sticking sensation still persisted in his throat. I saw him two hours later.

By the indirect method the bone was found sticking into the pharyngeal wall, slightly above the pyri-form sinus. Under cocaine anesthesia the bone was removed by the indirect method. No after effect was experienced.



Note: If one is accustomed to working by the direct method a seemingly simple extraction is often found very difficult by the indirect method. I worked for 30 minutes and was about ready to send him to the hospital when finally I succeeded in grasping and removing the bone.

#### Case No. 18.

Man—Age: 67 years.

Referred: Dr. Jahr.

While a dentist was placing a gold inlay in the back tooth of the patient it slipped from the forceps and dropped into his throat. I saw him immediately afterwards and the inlay was in the right pyri-form sinus.



It was removed by the indirect method with right-angle curved forceps.



Case No. 19—See *x*-rays No. 19.

Master D.—Age: 8 years.

Referred: Dr. Fred O'Donnell, Junction City, Kans.; Dr. Bert Poorman, Kansas City, Mo.

Four weeks and five days ago the child inspired a shingle nail. This was followed by coughing, choking and mild dyspnea. One week ago two unsuccessful attempts, under ether anesthesia, were made for the extraction. The first attempt was through the mouth; the second attempt through a tracheotomy opening.



The *x*-ray showed a nail 3.4 centimeters long directed with the head downward apparently in the right lower bronchus. The head of the nail was one and one-half inches from the diaphragm. The right lower lobe of the lung presented a homogeneous increase in density obviously pneumonia.

Two days after admission the child was given one-sixteenth morphine and a

ulating areas; this offered the greatest difficulty in locating the foreign body. We used suction and adrenalin sponges until we had a fairly clear field. The side-biting forceps were used, the nail grasped



CASE NO. 19

Lateral view—Shingle nail in right lower bronchus.

by the point, shielded in the tube and removed. Recovery was complete and the child left the hospital at the end of the fourth day.

*Comment*—The tracheotomy wound would seem to offer the easiest route for the extraction. Where one is accustomed to working through the oral route orientation is easier, hence we chose this method.

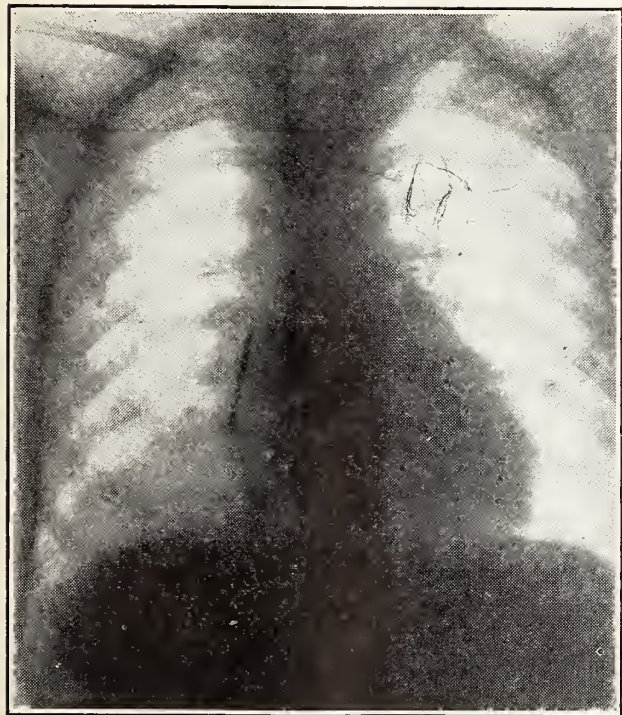
Owing to the extreme depth of the nail in the lung considerable narrowing of the bronchial tube was found.

Case No. 20.

Baby K.—Age: 3 years.

Ref: Dr. W. O. Miner, Garden City, Kans.

Three days before admission to the hospital the child was playing with a post from the base of an alarm clock. The mother saw the child put this in her mouth. Shortly afterwards she had a choking and coughing spell. Noisy breathing persisted and the temperature was as

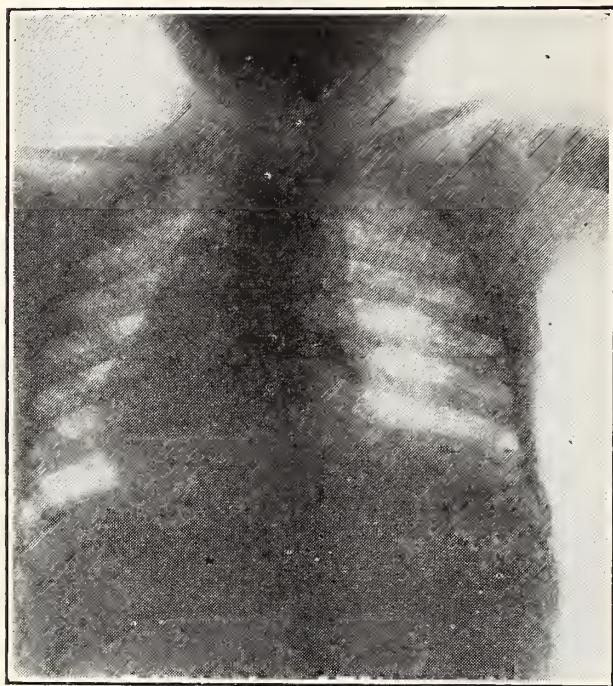


CASE NO. 19

Front view—Shingle nail in right lower bronchus.

5 m.m. scope was used by the oral route. Just below the glottis a large amount of muco-purulent material was encountered. After entering the right bronchus profuse bleeding was encountered from the gran-





CASE NO. 20

Alarm clock post in right main bronchus.

high as 103°. Physical examination showed blocking of the right middle lower lobes.



x-Ray showed metal foreign body in the right main bronchus.

The same evening of the day of admission through a 5 m.m. scope with side-biting forceps the alarm clock post was removed. The operation took about 5 minutes. The patient left the hospital 5 days later.

## Case No. 21.

Baby—Age: 4 years.

Referred: Dr. Lyle Powell, Lawrence, Kans.

Twenty-four hours before admission the patient swallowed a coat weight. Had been unable to take solid food and only a limited amount of liquids. Breathing not badly affected except at times. Child was perfectly well every other way.



About 1/2 Actual Size

x-Ray showed metallic foreign body in a lateral position about the level of the 7th cervical vertebra.

Eight hours after admission the foreign body was removed with Mathieu forceps through the laryngoscope. The patient left the hospital the following day and recovery was uneventful.

## Case No. 22.

Baby M.—Age: 15 months.

Referred: Dr. Nickel, Smith Center, Kans.; Drs. Lathrop and Stevens, Norton, Kans.

Twenty hours before admission the child had inspired a half peanut. This was followed by the usual choking, coughing and attacks of cyanosis. The x-ray was of practically no value as ordinary pulmonary emphysema was not present. The foreign body was located by Dr.



Frank Neff, from the physical examination, in the right bronchus. Twelve hours after admission the half peanut was removed from the right main bronchus through the 4 m.m. scope with the peanut forceps.

The larynx and trachea were found greatly swollen and a large amount of mucous secretion was present. The operating time was about 5 minutes. Three hours later a tracheotomy was required.

Twelve hours later the child developed a severe acidosis and dehydration. Salt solution was given by the rectum and under the skin. The acidosis was under control the following day and recovery was uneventful.

## —R—

## Specific Medicine

GEORGE W. DAVIS, M.D., Ottawa

Read before the Franklin County Medical Society March 28th, 1928.

The word "specific" in medicine is defined by Webster in his International Dictionary as a hard, fast, rock ribbed expression of a very clearly defined idea. He says: "SPECIFIC in medicine, a remedy that cures diseases upon some principle peculiar to itself, and not common to any two or more remedies.

"A remedy which infallibly cures all cases of certain diseases, to which it is deemed appropriate.



"No such thing as a specific, in either of these senses exists."

Subscribing to this classical definition would bar entirely the discussion I hoped to inspire at this meeting.

In the light of experience, I believe a more liberal definition of specific medicine and specific medication is of greater value to remedies that have come to be depended on to alleviate and prevent diseases.

With this liberty taken, I desire to discuss with you some of the remedies that in my own practice produce practically the same results in certain pathologies manifest in different individuals, and hope to bring out of your experiences comment on these and others in which you have established a sufficient confidence to warrant your permission for the use of the liberal definition of a specific.

I believe that a great number of pathologies are the result of certain definite etiological factors; and am coming more and more to believe in specific remedies for them.

I believe in medicine. I believe also in specific medicine within the limits of the definition set out before you.

I am committed largely to the idea of one drug, one medicine, one serum, one vaccine or one immunization for some diseases.

Edward Jenner believed in specific medication and demonstrated it. To his everlasting credit is the honor due from a grateful race, because of that belief.

Kloebs Loeffler, Gibson and Banzhaf believed in specific medication and the result of their belief is seen daily in the unfailing confidence with which the physician meets diphtheria and builds his backfires against its spread.

Banting and Best believed in specifics and Insulin for the prolongation of the lives of victims of diabetes resulted from their belief.

Koch believed in specific medication and made good. Pasteur likewise believed in it and with the collaboration of his contemporaries and later accomplishments of his professional posterity conquered hydrophobia.

Amaral believed in specific medication. The new polyvalent serum, Anti-

venin, has come to protect and save lives of victims of snake bite.

Drs. Dick and Dick in their researches have almost topped the hill with a specific for scarlet fever. Chaulmoogra Oil for leprosy, a specific already so well established that when I visited the Island of Molokoai I came to know what it had done for the victims of the "White Death."

Normal salt infusion for Asiatic cholera. Specific for this one of the world's worst killers. Emphasizing here in this remedy for cholera we have a remedy that almost if not quite meets the definition set down by Webster. Indeed had he lived to see its use in the treatment of Asiatic cholera, I believe his definition had been more liberal.

It came to my lot to have a very striking experience with Asiatic cholera while serving with the Siberian Unit of The American Red Cross on detached duty as medical officer of the Russian Railway Service Corps in Manchuria, Chosen and Mongolia.

Epidemic cholera broke out in July, just when the flies were very numerous, and made the filthy medium for its distribution. Hundreds of apparently sporadic cases with nearly a hundred per cent fatalities made their appearance almost simultaneously over a large area of North China but the center of the epidemic seemed to be at Harbin where we had our headquarters.

Being the only American physician then in Manchuria, the American Consul asked me to co-operate with the Chinese and Russian authorities to cope with the epidemic.

Some years previous to this time Chang Tso Lin had established a hospital at Harbin and supplied it with native, American and English educated, physicians.

They had had experience with cholera in the Philippines and had there learned of the new treatment for the disease. Very early in the epidemic, with means supplied by the Red Cross of both America and China we set to work gathering in the sick cleaning up the flybreeding areas, burying the dead, and treating the sick at the hospital.

There I saw for the first time how

quickly it kills. Well in the morning. Sick at noon. Dead at night. Buried the next morning.

All sick that could be reached and brought in were immediately infused with a gallon to a gallon and a half of normal salt water. Not much opportunity for asepsis. Most of the infusions given through an ordinary canula, in the vein, attached to a common fountain syringe. Solution made with distilled water taken from an American Locomotive. With these primitive appliances I saw and helped to treat and save the lives of about eight thousand patients, and did not see a death in patients treated with the normal salt infusion. Though the number we saved was less than half the number that died without treatment.

Coolies were nailing up a pile of coffins, filled, soon to go down the "Dorogo Schmrte". "The Road of the Dead."

Two Australian nurses came out of the hot hospital to get some fresh air and rest a bit, and sat down on the pile of coffins. The coolies had gone away to get more nails. The nurses saw one body in the coffin on which they sat, that they believed had a little life left. They upset the coffin and dragged the man to the shade of a sunflower patch and began his infusion. This was at 8 o'clock in the morning and at noon he stood up and was photographed with his rescuers and myself, and by evening began to help around the hospital, and remained with us an immune helper until the end of the epidemic, and when I left China he was teaching school in one of Chang Tso Lin's High Schools for China boys.

Normal salt solution for cholera. That's specific medicine.

I believe that most of you men have some tried and trusty remedy that you would be willing to place in the category of specifics because you know it will do the work. Not all of you would agree on the same remedy as a specific for certain diseases. I do not expect that you will sit silently by and listen to the enumeration of the things I believe are specifics, without protest and some discussion.

It is the purpose of this paper to bring out such discussion and in this way our time will be spent in the manner most useful to the society.

In the group of specific remedies that have served me best I mention Ergot, the fluid extract, for Erysipelas. When the case is bad I use it undiluted applied locally to the lesion, then, as the disease subsides, dilute through stages until one part of the ergot to nine parts of water will finish up. Ergot specific for erysipelas.

Belladonna with sweet cream for ivy poisoning. Dilute one part of the drug with nine parts of the cream at first, increase the strength as the dermatitis subsides. Belladonna for ivy poisoning.

Bi chloride of mercury for ring worm. One grain to the ounce of water, apply little and often, has never yet failed to eliminate all lesions produced by the tinea circinata. Bi-chloride for ring worm.

Santonin and calomel for most intestinal parasites. Its use so well known that the manufacturing pharmacist can get exorbitant prices for a little santonin.

Male Fern, alone for pork tape worm and in combination with an abundant meal of agar agar fodder, as sold by the pharmacist, specific for beef tape worm.

Quinine for malaria. Morphine for pain. Mercury, since the days of Paracelsus, for syphilis. The arsenicals, most convenient of them all, Sulpharsaphenamine for all end results of spirochetes. All specifics.

To this list I wish to add in closing, lanolin for skin cancers. Nine parts lanolin and one part oil of bergamot.

Order it dispensed in porcelain jar for the family medicine cabinet of the patients dresser, and direct its application once or twice a day during the rest of the life of the patient.

Under its administration the skin cancer will keep soft and pliable. Remain quiescent, painless and not unsightly. Will be there at the end of the life of its host, very little larger than when first observed though the patient lives a score or more of years after its onset, and it will never become a menace to the patient's comfort, nor be a contributing factor in the cause of death at the end.

Lanolin for skin cancers. The most outstanding example of specific medication I have found in a third of a century



of the study and practice of medicine, and gentlemen, if you forget everything else I have said to you about specific medicine, I want you to carry away a clear recollection of this example of specific medication. So, I repeat it again Lanolin nine parts to one part of oil of bergamot for skin cancers.

I studied medicine. Graduated in medicine, am practicing the use of medicine and expect to do so to the end. I believe in medicine.

The parent stock of the profession of medicine is rooted deep in a groundwork of experience and empiricism.

Since the dawn of civilization the idea of using things for the alleviation of suffering has been growing. Out of it many branches have sprung and flourished for a while and withered away. And, along side of it has sprung up many shoots, cults, pathies and isms and they have either merged into the parent stock of the great profession of medicine or have gone their way into the limbo of oblivion, and the use of medicine is growing steadily stronger through the years, adding a little here a little there, discarding the useless and keeping the useful. It is one of the great blessings of the race. I believe in medicine, and I believe in specific medicine and specific medication.

—R—

### TUBERCULOSIS ABSTRACTS

Treating a case of tuberculosis requires science and art. The tuberculosis patient is sick physically and psychically. "Treat the patient—not only the disease" is more than an empty play on words. In no disease is recovery more dependent on the intelligence and co-operation of the patient than in tuberculosis. Expert management of the pathological condition is not enough; the patient must also be taught and trained and encouraged to adjust himself to his handicap. Unless doctor and patient are sympathetically in accord, this cannot be achieved.

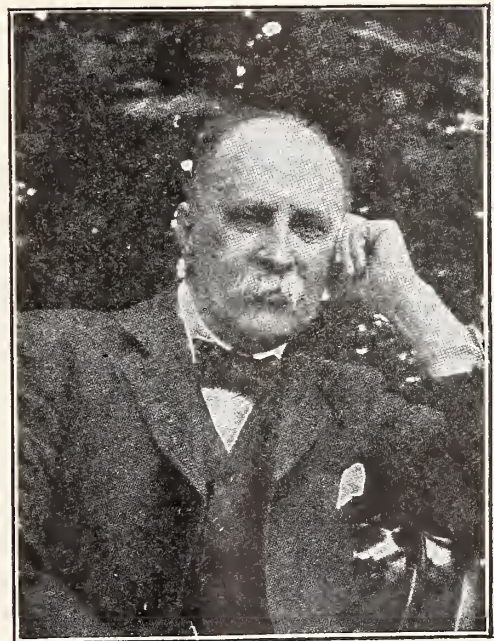
#### Sir William Osler Said

"There is no greater mistake than to keep from the patient the knowledge that he has tuberculosis in its early stages, as it is only by having that knowledge

that he can be expected to recover. We are criminal participants if we refuse to tell the patient exactly the nature of the trouble."

### Safety in Knowledge

Patients may recover without even knowing they are tuberculous; but it is far better that a tuberculous person study the disease in order that he may recover more rapidly and that he may avoid a future breakdown. Knowledge of the disease gives one a feeling of safety, and safety means happiness. A person who has been tuberculous and is well informed on the subject is not often worried about the future. He knows how to avoid trouble, he feels safe, and, as a consequence, is more likely to live a normal and happy life. Patients, taking



a rest cure, should learn tuberculosis—learn it well! Traveling about in the dark is an unsafe way to get through life.

Persons with supposedly imaginary troubles are commonly advised to "forget it." Such advice is dangerous. The great evil resulting from the indiscriminate use of the expression—forget it—is that the patient often has at the time not only a serious but actually a fatal disease that the doctor has not discovered.

After a tuberculous patient has taken a rest cure and has gone back to work, his mind begins to build up a barrier to exclude the disagreeable parts of his recent experience. This is normal. Only morbid minds and chronic sympathy seekers continue to dwell on hardships, past or present. The healthy mind forgets disagreeable experiences. For this reason, persons that have been tuberculous often wilfully deny the fact after recovery from the disease. It is commendable self-deception. But they do follow the straight and narrow path, and, should evidence of what they think may be active disease reappear in them, they go at once to their medical attendant for another examination.—*Getting Well and Staying Well*, John Potts, C. V. Mosby Co.

### **Instructing the Patient**

The ultimate result in pulmonary tuberculosis depends directly on the patient's application of the knowledge he has acquired about what he should and should not do. Education of the tuberculous patient closely resembles psychotherapy. In a preliminary talk, Brown tells the patient a few fundamental principles. He describes the pathology, using homely similes comparing the newly formed scar tissue, for example, to a delicate spider web which may easily be stretched or broken by the patient's indiscretion and so permit tubercle bacilli to migrate to new areas of the lung. He does not peremptorily order the patient to bed but puts the whole problem before him so that the patient himself elects to go to bed. While in this state of mind, the patient is receptive to all sensible suggestions. The role played by rest, fresh air and nutrition are then explained to him. At each visit, he is given additional information. Questions are jotted down when they occur to him and are discussed with the doctor at the next visit. The care needed to recover and to prevent future breakdown becomes a part of the patient's subconsciousness.

Mention of complications is taboo until they actually occur. Physical findings are not discussed with the patient except that certain sounds heard in the chest are called "green lights" meaning "go slow" or "red lights" meaning

"lay off in the side track for a while." Occupational therapy (when bed rest is no longer required) is a God-send. Idle patients are tempted to do foolish things.

After the training in the sanatorium or by a private physician, the patient passes on into the university of life, there to solve his own problems with the aid of occasional advice from his physician.—*Instructing the Tuberculosis Patient to Assure Permanency of Recovery*, Lawrason Brown, *Jour. of the Out. Life*, March, 1928.

No less important than the teaching and training of the patient are the social obligations which a physician automatically assumes with each case. Tuberculosis is a contagious disease. Members of the patient's family, as well as the general public, are entitled to that protection which the social and public health machinery designed for that purpose is supposed to provide. These protective devices cannot, however, function efficiently without the full co-operation of the physician.

### **New York State Experience**

In New York State, 7,762 cases of tuberculosis were reported to the health department in 1927. Of these, 3,625, or 47 per cent, were reported by 114 tuberculosis specialists, while 4,137, or 53 per cent, were reported by 6,675 general practitioners. Of the cases reported by specialists, 4.5 per cent were reported after death, and of those reported by general practitioners, 17 per cent after death.

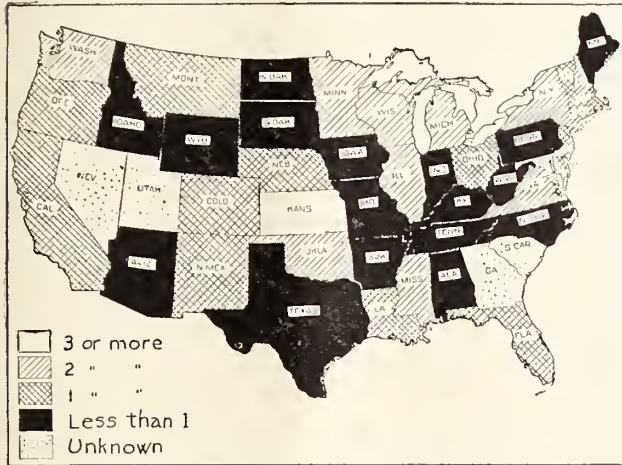
Of the case of pulmonary tuberculosis reported by specialists, 25.7 per cent were designated as minimal, as against 15 per cent minimal reported by general practitioners.—*Special Report: Division of Tuberculosis*, N. Y. State Dept. of Health.

### **Prompt Reporting Necessary**

Nearly 12 per cent of tuberculosis cases reported by physicians to the Board of Health of Boston were reported after death. Another 12 per cent were reported only one week before death. Of the cases reported during November,



1927, one-half had been reported within a month of death. "There is only one conclusion to be drawn from these figures and that is that there is a serious delay in reporting cases of this disease."—Editorial, *Boston Med. and Surg. Jour.*, February 9, 1928.



Ratio of cases of tuberculosis reported to deaths from tuberculosis, according to states. Compiled by Dr. Robt. E. Plunkett, N. Y., Dept. of Health.

### Books for the Patient

Lawrason Brown: *Rules for Recovery from Pulmonary Tuberculosis*, Lea & Febiger, 217 pp.

John Potts: *Getting Well and Staying Well*, C. V. Mosby Co., 150 pp.

Gerald B. Webb and Charles T. Ryder: *Overcoming Tuberculosis, An Almanac of Recovery*, P. B. Hoeber, 198 pp.

A more complete list of books on tuberculosis for laymen, as well as booklets and leaflets, may be secured from your tuberculosis association, or from the National Tuberculosis Association, 370 Seventh Avenue, New York City.

R

### KANSAS MEDICAL LABORATORY ASSOCIATION

#### The Co-operation of Health Officers in Highway Sanitation Problems

EARNEST BOYCE

State Sanitary Engineer, Lawrence, Kansas

A story is told of a man who when young crossed the prairie with a schooner and ox team. Later in life he retired and having time to devote to public activities was elected a councilman and assigned to the committee in charge of the municipal water works.

When the matter of proper sanitary safe-guards for the supply was brought before the committee, this member recalled an earlier water supply that was obtained from the wheel tracks behind the schooner on the prairie trail and that he did not develop typhoid from the use of this supply. He failed, however, to realize that the isolation of the pioneer reduced the contacts necessary to the spread of infectious disease to a minimum, and that since neither he nor his ox team were carriers of disease that it was not probable that dangerous contamination of the surface water existed.

The trail still exists but is vastly changed. It has now become a highway frequently congested with the cars from many states and many more communities. It is now possible to travel from one community to another quickly and the isolation of one section of the country from another has, for the most part, disappeared. While formerly the health officer regarded the traveler on a railway train as a potential source of outside infection, he must now in like manner regard the person who travels the highways. This person must at the same time be both protected and be protected against. The traveler must be dependent upon the sanitation of the community through which he passes—he cannot control his traveling environment. At the same time his contacts with the various communities through which he passes should be such as to minimize the chance that: should he be a disease carrier, either active or passive, that the disease be transmitted to those in the community, or to his fellow travelers. Since the conditions which would make it possible for the traveler either to spread or contract disease are to be found existing along our main traveled highways, it follows that the problem of roadside or highway sanitation is one worthy of careful study.

So long as the urban population remains in urban districts they have little personal responsibility in a good many matters of sanitation. Their water supply is brought to their faucet and their sewage wastes are removed all under the supervision of those whose special responsibility it is to see that all the re-

quirements of good sanitation are met. Garbage and rubbish wastes are collected and removed and the only thought that is given to this work is when there is some interruption of service. Because of this service the individual very soon becomes dependent and lacks resourcefulness when he is removed from his environment. As a traveler on the highways he is prone to assume that all available drinking water is safe and that he is especially favored should he find a roadside spring.

Released from his environmental control and missing his accustomed sanitary conveniences he is apt to be careless in the disposal of sewage wastes and such refuse and garbage as may be produced. His carelessness in the disposal of wastes makes him at least to a certain extent a health hazard to the community through which he travels and at least to this extent the community should supervise his actions. He might be taught by instruction and regulation to observe fundamental sanitary requirements even though such observance would be at some inconvenience. He might also be taught to regard roadside water with suspicion and to get his drinking water from municipal supplies only.

We would suggest that the easier way to handle both of these problems is to make it convenient for the traveler to observe the desired requirements and to easily find suitable accommodations to care for his needs; also to have information available to advise him regarding these accommodations. It seems obvious that these facilities should have sanitary supervision if they are to be properly maintained.

Recognizing the hazard presented by auto travel and the use of tourist camps, some years ago the State Department of Health gave the problem of the tourist camp considerable study. As the result of this study, it was decided that it was necessary from the standpoint of the community and from the standpoint of the traveler as well, to make certain sanitary requirements of these camps. Since the efficient administration of these requirements was dependent on frequent inspections, it was obvious that the prob-

lem could be best handled through the county health units.

This paper is presented, however, not so much for the purpose of discussing the sanitation of tourist camps but rather to call attention to other phases of the problem of highway sanitation; namely, the public comfort station and the roadside water supply, regardless of whether they are to be found in the tourist camp or at some gasoline filling station or roadside eating place. This is not an abstract problem. Tourists have depended on the quality of water supplied to them in tourist camps in this state and they have developed typhoid fever as the result of using water that was made available. Further the problem still exists and it is only good fortune that prevents outbreaks of water borne disease at many places where water is supplied to auto travelers. Roadside hamburger and barbecue stands are found to be serving water that contains *B coli* not only in the 10 cubic centimeters portions but in the one c. c. and even in the .1 c. c. portions. Comfort station facilities are frequently of the most primitive sort and contribute not only to the pollution of ground water but are also responsible for a fly nuisance.

A very complete system of inspection and analysis has been developed by the United States Public Health Service to assure the interstate traveler by train that the coach water furnished him meets a high standard of quality. It seems equally important that the person that travels by auto have some protection from the unsafe semi-public supplies that are offered for his use. The need for this sort of work has been recognized in several states.

Safe water supplies are being marked and warnings are being posted where the dangerous supplies cannot be eliminated. In Missouri, the State Board of Health, in co-operation with the State Highway Commission, has started not only the marking of the safe water supplies along their main highways but also the grading and marking according to grade of the public comfort stations.

Now as to the problem in Kansas. About a year ago the State Board of



Health passed a resolution authorizing the inspection of the roadside water supplies and comfort stations with the marking of the safe supplies and the grading of comfort stations according to sanitation and equipment.

Unfortunately the funds available are barely sufficient to care for this work previously prescribed and aside from the providing of safe and unsafe markers for roadside supplies, little work has been done. The matter was taken up last year with the county health departments and we are glad to say that in some instances these supplies were inspected, analyzed, and properly tagged.

While it may be that later the State Department will be in a position to do the work authorized by the resolution we feel that the work is urgent enough to warrant our asking the hearty co-operation of the county health officers in an attempt to at least eliminate the dangerous roadside water supplies.

Since this is in some ways a problem of general or state wide interest and also to encourage this work which we feel is very urgent and important, the State Water Laboratory will at least during the coming season analyze, without charge to the county health officer, samples sent from these roadside supplies. The only qualification of this offer is that when these analyses are requested that the county health officer agree to make as complete a survey of these supplies in his county as is possible and to send a description of the supply as to its location, ownership, and sanitary surroundings. When this survey has been completed in a county and the safe supplies are ready for marking, the State Department will provide the Sunflower Safe Water Seal to place on those found satisfactory.

The dangerous supplies should not be made available to the public and there is ample statutory authority for condemning them. This authority is granted under Chapter 65-163, revised statutes of 1923.

This is a problem to which every laboratory worker and physician should be alive. Part of the responsibility for the education of the public rests upon him and it may well be that in the future the

examination of water and food supplies will to a certain extent devolve upon the local laboratory in co-operation with the State Board of Health laboratory.

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## UNIVERSITY OF KANSAS CLINICS

### Nervousness—A Riddle

CLINIC OF DR. G. LEONARD HARRINGTON

Department Neuro-Psychiatry

This condition has been a riddle to the layman and also to the physician. Hippocrates thought hysteria a form of nervousness, was the result of the uterus wandering through the body looking for male eggs. To correct the trouble perfumes were applied to the vulva and bad smelling substances to the nose. It was thought this persuasion and coercion would induce the uterus to return to its place. Asafoetida and valerian are still used, at times, today. Finally, however, during the last few years intensive investigations have been made on this subject of nervousness, resulting in considerable insight into its causes, mechanisms and treatment.

#### WHAT IS IT?

*A. Manifestations.*—The surface or manifest aspect of this condition is made up in part, of the following states: "Decrease of power to co-ordinate, persistent thoughts, preoccupations, unpleasant dreams, insomnia, errors, accidents, scalp pains, headache, dizziness, stiffness or weakness of external muscles of the eyes, back of neck, limbs, back, tongue, pharynx, increase or decreased secretions of the glands of the mouth, stomach; tachycardia, dyspnoea, high blood pressure, loss or freakishness of appetite, diarrhoea, constipation, dysmenorrhoea, amenorrhoea, sexual impotence, pollakiuria, hyperirritability of diseased structures, decrease of energy or efficiency or ability to learn" and also "Amnesias, anesthetics—specific, localized, general. Hyperesthesias, parasthesias. Postural tensions. Simulations of postures and functions. Convulsions with or without loss of consciousness. Eliminations of segments or functions, recurring incoordinations, errors, accidents. Misinterpretations, misrepresentations. Fixed preferences,

aversions, phobias, compulsions, obsessions (acceptable to ego), mannerisms, attitudes, fetiches, symbols, rituals, habits, sexual reactions, craving for certain stimuli—esthetic, sexual.” (Kempf—in his *Psychopathology*).

*B. Mechanisms.*—The deeper part of nervousness in contrast to the presenting or manifest aspect is simple in nature. A fundamental law here, as elsewhere, is that of action and reaction, stimulus and response or more specifically applied, environment and organism interesting.

In the case of nervousness this law may be disturbed as the result of the organism (patient) being unable to use environmental elements that could neutralize or satisfy organismal tensions, motor sets, wishes. (Thomas, the sociologist, enumerates four primary wishes, needs, cravings: wish for recognition, for security; for new experiences i. e. adventure, for response. These are always seeking, finding or using opportunities for expression. They are dynamic.) This inability to use a possibly satisfying environmental element may be the result of conditioning or training in early life.

On the other hand a lack of a reasonable balance between environment and organism follows, in some cases, the removal by death or otherwise of a love object or the environment fails to give recognition through an election or a bank failure, etc.

The cases that form the basis of this paper were physically free, medically speaking. They were studied by a competent internist. Their symptoms can then be looked upon as resultants of a conflict i. e. a disturbance in the interaction of the organism and the environment.

In one case the husband (environmental element) was so interested in neutralizing his “cravings” for new experiences that he neglected to satisfy the “wishes” of his wife. He played poker and she longed for companionship.

(It is interesting to note that neglected wives, at times, get desired attention by becoming sick; the sickness drags the husband to the doctor’s office, keeps him up late, makes him go from cellar to attic looking under beds, behind doors, into

closets, etc., for burglars, etc. Sickness, at times, like the child’s temper tantrum is a handy and efficient tool.)

In this case the lack of balance gave rise to the chief complaint: an uncontrollable and apparently causeless crying.

Suppression, a partial “pushing out” or “forgetting” process, is nicely illustrated in the case of a woman who complained of bilious attacks, spells in which she was very “nervous”, could not move arms or hands, but in which she retained consciousness. Then, too, she had recurring terrifying dreams.

The study revealed she was seeing a man with whom certain intimacies were indulged. She did not own the real situation. For example she was asked does he ever hold your hand? “Yes, but it does not mean anything.” Well does he ever kiss you? “Oh yes, but it is of no consequence—it is just a passing thing.” When, however, she began to appreciate the situation i. e. when she realized she was in a maelstrom, out of which she now realized she would have a great deal of difficulty in swimming, she shuddered. In fact she was so upset she had to go to bed for twenty-four hours. A reaction just as real as that following typhoid vaccination.

Now the dream that repeatedly distressed her presented, I think, her real problem. One part of her personality (an emotional self) symbolized as a thief creeping toward her as she lay asleep, was about to get her or perhaps better to say control her i. e. steal her away from her social moorings which her social self so highly prized. She was a mother of several children and he a father but not of her children.

This state of affairs not only terrorized her in her sleep but also in her conscious state i. e. when she permitted herself to own the true situation.

She made the very significant statement: “I wish I had known three years ago (beginning of friendship which didn’t mean anything) what I know today—this thing would never have crept on me as it has.”

#### WHAT CAN BE DONE

If a permanent more or less normal interaction of the organism and the en-



vironment is to be had it will be because all elements of the conflict will be found in the solution of the problem.

To cast any element out is to dissociate the mind and thus to re-establish a problem—disavowal does not mean annihilation.

In such cases as described the patient is led to see and own the true situation. Then an effort is made to help the patient see the whole picture i. e. consider every pertinent factor of his life—organismal and environmental and to adjust to the total situation.

When a patient sees the ill effects that come from unguided and uncorrelated expression of emotions and, too, when he can see how when they are directed they make for vitality, force, attractiveness, standing, stability, he is possibly more willing to put his "affections" (and other urges) on ice for a while as Osler suggests. Thus guided and correlated all primary urges will be more or less satisfied. Both urges and social requirements will be properly handled.

Nervousness is but a resultant of a lack of proper interaction between the organism and the environment. *Nervousness is a problem.*

#### **The Injection Treatment of Varicose Veins**

The injection treatment for the obliteration of varicose veins is attracting increasing attention. The French school, under the leadership of Sicard, has been using sodium salicylate in solutions of from 20 to 40 per cent. Linser used 20 per cent sodium chloride solution, and reported 6,000 injections. Noble, in Germany, has made injections in 3,000 patients with 50 per cent dextrose. Meisen uses equal parts of 25 per cent solution of sodium salicylate and 10 per cent sodium chloride. In this country, McPheeters has reported favorable results with sodium salicylate. The most important consideration in connection with the injection method is the danger of pulmonary embolism. Thus far, reports of four cases of fatal pulmonary embolism seem to be available. Of these, two occurred after correct technic and therefore appear unavoidable. Against these two fatalities there are reports of 14,000 successful injections. The effi-

cacy of the method will depend much on the proper selection of cases. Definite contraindications to the injection method include cardiac and renal disease accompanied by venous stasis and dilatation of veins, hypertonus, changes in and obliteration of the deeper veins, pregnancy, and large intrapelvic tumors. (J.A.M.A., August 4, '28).

#### **Convalescent Serum in Epidemic Poliomyelitis**

The main indication for treatment in this disease is the prevention of paralysis, which is due to the action of the poliomyelitic virus on the nerve cells that preside over movement and nutrition of voluntary muscles. Fortunately there is a period in the evolution of the attack of poliomyelitis during which it may be possible to neutralize the virus before it can develop its maximum destructive effects on the motor nerve cells. There seems to be no question that poliomyelitis can be recognized in this stage. The results obtained from intraspinal and intravenous injections of convalescent serum are encouraging. Theoretical considerations and the results of careful observation appear to justify fully the further trial of convalescent serum in preparalytic poliomyelitis. (J.A.M.A., August 11, '28).

#### **An Unusual Letter**

A prominent physician in the Northwest recently addressed the following letter to the Abbott Laboratories.

"It is not common nor usual for me to acknowledge the receipt of pamphlets and literature from manufacturing chemists. However, I find your brochure—just at hand—relating to Ephedrine—such an admirable document, with such obvious efforts to supply tested information, that I hasten to compliment you upon it. It holds itself strictly to a statement regarding this valuable drug; to an enumeration of fields in which those of us who have used it must acknowledge its potency; it has an excellent bibliography."

Copies of the Ephedrine brochure referred to may be obtained on request to the Abbott Laboratories, North Chicago, Ill.

# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - Editor**

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### SHORTAGE OF DOCTORS IN RURAL COMMUNITIES

At the last annual meeting of the American Medical Association the National Grange presented a statement concerning the growing shortage of physicians in rural communities which has received considerable comment. We are prevented by lack of space from reproducing the whole of the communication but the following statement of facts is quoted from it:

"According to the findings of a survey made for the General Education Board by Lewis Mayers and Leonard V. Harrison, published in 1924, there were approximately 33,000 physicians in places of 1,000 inhabitants or less in the United States in 1906. In 1924, according to this report, this number had been reduced to 27,000, showing an actual loss of 6,000 rural physicians in 18 years. More recent investigation shows that almost one-third of the towns of 1,000 or less, throughout the United States, which had physicians in 1914 had none in 1925. The average age of rural doctors throughout the country in 1925 was 52 years. Since the average age at death

of American physicians is 62 years, it will be seen at a glance that the present generation of country doctors will have practically disappeared in another ten years.

"With this situation staring us in the face, (it is ominous, to say the least, that only a very small percentage of the medical doctors graduated during the past ten years have taken up the practice of their profession in the rural districts. Careful inquiry reveals the fact that there are literally scores of rural counties in the United States where not a single doctor receiving his degree during the past ten years has settled.

"In the meantime, we hear more and more of the increasing hosts in the rural sections who are "medically helpless," while the cost of medical service, where it is to be had, mounts higher and higher.

"Notwithstanding this situation, we find that the Commission on Medical Education, which is now studying the subject, reports that with the medical school capacity we have in the country at the present time, and their graduates averaging 27 years of age, the number of physicians in practice is actually decreasing and that their number will not regain its present size of 130,000 until 1965. In the meantime, the population of the country, the Commission estimates will have increased from 115 millions to 164 millions.

"We glean from a published report of one of the committees at the last annual convention of the American Medical Association, held at Washington, that "the medical profession does not attract so many qualified young men and women as formerly." The report also notes that a dangerous concentration of doctors in cities is taking place, leaving the rural communities without adequate medical service.

"The reason for this situation is not far to seek, and is hinted at by the committee in question. Under the minimum requirements which have been established, the prospective doctor must spend seven years after leaving high school in securing his education. Aside from the long period of pupilage, he must assume excessive financial responsibilities before he can begin the practice



of his profession. This automatically operates to close the doors of the medical profession to thousands of those who possess all the natural qualifications to make them successful physicians under a more reasonable system of preparation."

At the present time there is no occasion for alarm on the part of the rural communities in Kansas. A careful check has been made of the towns in this State with the A.M.A. Directory for 1927. According to this check there are no towns in Kansas with populations of 1,000 or more that do not have one or more doctors of medicine. There are but eight towns in the State with 500 inhabitants or more that have no doctors and four of these are within a very few miles of other towns where several doctors are located. In making this check one could not fail to be impressed by the number of towns with less than 500 inhabitants having two or more doctors.

It is true that there are a considerable number of smaller towns now with only one doctor that formerly had two or three. But that is the natural result of the general development of the country. Good roads, automobiles and telephones have made it possible for one doctor to take care of twice as many people as before we had these things, but the fact is that he does not, as a rule, have the opportunity. The same conditions that have made it possible for the doctor to see more patients has also made it possible for the people to take their illnesses to the neighboring larger towns. The doctors in the small towns still get the emergency cases but a large per cent of his former business is diverted to the cities. This does not simply mean, as the communication from the Grange implies, such business as requires special care, it includes a large per cent of the chronic cases, especially those able to travel about.

When the standard course of medical instruction was adopted it was generally conceded that sufficient details of medicine could not be imparted to medical students in less time than that allotted in this course. To this standard course was added by a considerable number of state boards of examiners a requirement for at least one year of hospital internship. This is now generally recognized as a part of the standard medical curriculum and is required by eleven medical schools and by thirteen state boards.

When medical education was in process of reorganization it was held as one of the essentials of an acceptable medical school that it should at least control a general hospital with capacity sufficient to meet the needs for clinical instruction. It was the current impression then that much at least of the last two years of the curriculum should consist of hospital clinics. It seemed at that time that the student could in this way follow up the progress of the disease and the effects of treatment and that he would become familiar with hospital methods.

There is reasonable doubt if more hospital training than may so be acquired really adds anything of importance to the equipment of a practitioner in a rural district, especially where a hospital is not convenient and where he must depend upon his own resources and facilities. There is some question if one or two years practice in a rural community would not be worth more to him than a hospital internship.

Whether this be true or not it is a fair assumption that a year or two years of rural practice would add greatly to his resourcefulness even after he has had a year as hospital interne. The suggestion is therefore offered that, in those states where a shortage of rural physicians does exist, the state boards issue a temporary permit to graduates and

require that they practice two years in a rural community before a permanent permit is granted. This requirement could be made as a substitute to the hospital year or as an addition thereto. It would certainly do much toward relieving the situation complained of.

#### WHY A BASIC SCIENCE LAW

Laws regulating the practice of medicine are intended to protect the public against those who, from lack of knowledge of the human body and its diseases, may do injury or fail to apply the proper means for relief. These laws have very generally failed to do so for any great length of time.

When the medical practice act was adopted in this State it was impossible for anyone to anticipate the conditions which now exist. No one then anticipated the rapid development of cultism, and no one realized how easily special enactments for these various cults could be secured. It seems to some of us now that one of the most unfortunate errors in our medical practice act was in the composition of the board, or, in other words, the plan by which the medical profession must control the administration of the law. There are also a good many who believe that this control should still be retained, that the medical profession is more competent than layman to determine the fitness of an applicant for a license to practice medicine in this State.

The osteopaths and chiropractors, however, are now pretty well entranced and they object to having doctors of medicine determine their qualifications to practice osteopathy or chiropractic; nor would the doctors of medicine consent to be examined by osteopaths and chiropractors.

A composite board would be quite as unsatisfactory and would require constant additions as other schools and cults were permitted to enter the State.

The Basic Science Act will protect the people against ignorant and incompetent practitioners of the healing art, but it will not diminish the present requirements for permission to practice medicine. A certificate from the board of examiners in the basic sciences will not permit the holder to practice any form of the healing art. When an applicant has passed an examination before the basic science board and received its certificate, he must then apply to the Board of Registration and Examination, the Osteopathic Board of Examiners or the Chiropractic Board of Examiners for a license to practice and he must meet all of the requirements now specified in the regulations of the board to which he applies. But in no case can either of these boards consider an application unless the applicant holds a certificate from the Basic Science Board of Examiners. Either of these boards may, however, refuse to issue a license to any applicant found unqualified or unworthy even though he may have a certificate from the Basic Science Board.

It is not claimed that this is an ideal form of legislation but it is the best that has so far been devised to meet such conditions as we have in this State.

It still leaves the issuing of licenses to practice medicine in the hands of medical men, but it gives the State the power to say who shall not be licensed.

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#### CHIPS

A unique treatment for chronic intractable sciatica is described by Viner in the August number of Archives of Neurology and Psychiatry. The patient is placed in the knee-chest position, the sacrococcygeal area washed with alcohol then painted with iodine. At the coccygeal end of the sacrum there is a small central depression between two lateral tubercles. Into this depression a preliminary injection of 2 or 3 c.c. of a one per cent procaine hydrochloride is made. A large needle is then inserted in the mid-



line parallel with the body of the sacrum and into the sacral canal, 20 c.c. of one per cent procaine hydrochloride is then injected. This is followed by the injection of from 50 to 100 c.c. of sterile Ringer's solution, physiologic sodium chloride solution or liquid petrolatum. From three to four such injections are given at intervals of one week. The author finds this treatment efficient for all kinds of chronic peripheral pain originating at or below the third lumbar segment which is not of vascular or sympathetic origin. The injections are not into the cerebrospinal canal but into the sacral vertebral canal outside the cerebrospinal sac.

A suggestion as to the cause of post-operative pulmonary complications is offered by Powers in an article on Vital Capacity, published in the August number of Archives of Surgery. Abdominal operations produce a tremendous immediate decrease in vital capacity followed by a gradual return to normal. Partial removal of the thyroid gland likewise causes an immediate fall in vital capacity followed by rapid recovery. All other operations on the neck and those on the extremities and rectum have no effect. It has been found that postoperative pulmonary complications occur in 8 per cent of epigastric operations, 4 per cent of laparotomies and 2 per cent of all operations. This is attributed to the greater mobility of the field of operation and the freedom with which small emboli may be dislodged. Following these epigastric operations there is more complete and prolonged splinting of the abdomen and lower part of the thorax with long continued diminution of respiratory movements. It has been shown that a partially atelectatic lung is more favorable for the reception of emboli.

That thyroidectomy is materially beneficial in those cases of toxic goiter associated with serious mental disease seems to be the logical conclusion from the report of DeCourcy in the Archives of Surgery for August. In fourteen such cases all but two recovered mentally after operation. In all but one of these cases the goiter was of the exophthalmic type.

## SOCIETIES

### STAFFORD COUNTY SOCIETY

Society met in St. John at Dr. J. T. Scott's residence, Thursday evening, August 9th. This was another meeting open to the public and more than fifty were in attendance. Seven physicians of a total membership of eleven were present and a guest, Dr. Jenkins of Pratt, was on the program.

The meeting was held on the lawn, beneath the trees, the weather was ideal, the program was of interest to the general public and was praised by all present.

It was the most successful of all our public meetings so far held and demonstrates conclusively that they can be successfully held in any county having a county medical society.

On the program which appears below were, a preacher, a lawyer, a doctor and a musician. All were present but the lawyer, who was called out of the city that afternoon and being unable to return sent the following telegram:

Dr. J. T. Scott,  
St. John.

Regret cannot be with you tonight. I send greetings to the best and most useful Medical Association in Kansas. Your Public Meetings are inspiring and educational to the public.

ROB'T GARVIN.

### PROGRAM

1. Address—"Competition vs. Co-operation," Rev. Dr. McCormick, St. John.
2. Address—"Post-Graduate Work in Boston," Dr. Jenkins, Pratt.
3. Violin Solo—Miss Ione Aitken, St. John.
4. Address—"Public Medical Meetings," Rob't Garvin, St. John.
5. Stereopticon Picture—"Food Selection."
6. Eat Apples and Visit.  
Leave behind all cares and worries,  
Spend an evening 'neath the trees,  
With the moon and stars above you,  
Think and act just as you please.  
Wear a smile, renew acquaintance,  
This is no formal affair,  
When it's over you'll be saying,  
"I am glad that I was there."

The audience gave evidence of intense interest and at the conclusion of the pro-

gram mingled socially until after eleven o'clock.

There were in attendance men, women and children from the neighboring cities of Stafford, Pratt and Macksville. Dr. F. W. Tretbar, our President, is in California and Dr. Hart, ex-President, presided.

The Secretary wishes to express sincere thanks to the members of the local Society and to all who responded to the invitation.

Respectfully,  
J. T. SCOTT, Secretary.

### Medical Society of the Missouri Valley

The Medical Society of the Missouri Valley meets in Omaha October 30th and 31st and November 1st. Dr. Fred Smith, Professor of Medicine of the University of Iowa is the President.

A reorganization of this medical society was accomplished at the Des Moines meeting last year. The objective of this association as stated in the new Constitution is as follows: "The object of this Association shall be primarily educational. It shall give opportunity to the faculties of the Universities of the District, to members of the Association and to invited guests to present such work as will tend to place the practice of medicine in the district on a higher scientific plane."

A program will be provided this year which is in keeping with the above stated purpose of the society. It will consist of papers, addresses and clinics. Among the invited guests who have accepted places on the program are Dr. B. J. Clawson, Assistant Professor of Pathology, University of Minnesota; Dr. J. B. Herrick, Professor of Medicine, Rush Medical College; Dr. M. L. Harris, President of the American Medical Association; Dr. A. C. Ivy, Professor of Physiology, Northwestern University Medical School; Dr. Carl R. Moore, Professor of Biology, University of Chicago; Dr. F. C. Mann, The Mayo Foundation, and Dr. Leonard G. Rowntree, the Mayo Clinic. There will be other invited guests of note. The subject matter to be presented by members of the Association promises to be unusually rich.

The meetings of the society are open to the practitioners of the district. A registration fee of two dollars will be charged, which fee includes the annual dues.

It has been the opinion of some of those interested that a society with the above objectives could be made an educational force of great value. The enlisting of the Universities of the District should be of great benefit to all of us, and should insure good programs and enlightened management. It should give the practitioners an opportunity to meet and know the men who influence to a great degree medical education and medical progress in the region. This contact should be advantageous to both practitioner and teacher.

### DEATHS

Harry Reding, Lawrence, age 67, died of heart disease July 4. He graduated from Missouri Medical College, St. Louis, in 1888. He was a member of the Society.

A. F. Meyer, Cassoday, aged 70, died May 10 of paralysis. He graduated from Independent Medical College, Chicago, in 1891.

Valentine V. Adamson, Holton, aged 95, died August 5, after a short illness. He graduated from the Medical Department of the University of Iowa in 1856 and from Bellevue Hospital Medical College in 1869. He located in Holton in 1862.

Charles W. Schwartz, Topeka, aged 57, died August 17, after a protracted illness. He graduated from Northwestern University Medical School, Chicago, in 1897. He was a member of the Society.

### BOOKS

Blood and urine chemistry by R. B. H. Gradwohl, M.D., and Ida E. Gradwohl, A.B.—Published by the C. V. Mosby Company, St. Louis. Price \$10.00.

This work was prepared for a text book for both students and practitioners. One of the most commendable features of this book is the clearness and simplicity with which the various procedures are described. The methods described are all standard and up to date. The im-



portance of blood chemical analysis is now so generally recognized that every practitioner should know something at least of the methods used and the value of the various findings. Even if one does not do this work he will find much valuable information in this book.

Manual on blood pressure by J. T. Scott, M.D., St. John, Kansas.

The author has presented here in a very convenient little pocket manual what every practitioner ought to know about blood pressure. He describes the best methods for determining the blood pressure and he has very carefully stated the significance of the various deviations from the average normal. To the conclusions drawn from his own extensive experience he has added many valuable data from the literature on the subject. One is impressed with the thoroughness, the accuracy and the conciseness with which he has covered this important subject.

The medical clinics of North America. (Issued serially, one number every other month.) Volume XXII, Number 1, (Chicago Number, July, 1928.) Octavo of 290 pages with 54 illustrations. Per Clinic year, July 1928 to May, 1929. Paper \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1928.

Readers will find the July number of Medical Clinics of more than usual practical value. One of the very interesting clinics is that of N. S. Davis III in which a series of cardiac disorders is presented. Karl Koessler discusses the successful treatment of severe pernicious anemia. Carr has a very instructive article. One of the reports that should appeal to the practitioner is by Strouse and Glassberg concerning diabetes in which the late results of insulin treatment are discussed. Pilot presents some cases of bronchial asthma and vasomotor rhinitis and discusses hypersensitiveness and desensitization. Portis and Hoffman have a clinic in which malignant diseases of the stomach and liver are presented, also acute hemorrhagic pancreatitis, and subacute bacterial endocarditis. Special mention might be made of several other contributions to this number, but these few are fairly illustrative of the general character of all of them.

Goiter Prevention and Thyroid Protection by Israel Bram, M.D., former instructor in Clinical Medicine, Jefferson Medical College, Phila-

delphia, etc. Published by F. A. Davis Company, Philadelphia. Price \$3.50.

The author has written this book for the instruction of the laity as well as the medical profession. He calls attention to the very great and increasing prevalence of goiter and especially the exophthalmic goiter, and attribute the to the high tension mode of existence of the past decade or two. He feels that the thyroid gland is more sinned against than sinning and says that there need be little disturbance of this vital organ if certain simple rules of physical and mental conduct were observed. The purpose of the book is to supply such information as will help to prevent potential and overcome actual structural and functional disorders of this gland. In his discussion of the treatment of exophthalmic goiter he says this is a constitutional malady in which the thyroid, if swollen, is the end result.

—R—

### Barbital and Related Hypnotics

Many substitutes for barbital have been introduced with the claim of greater relative hypnotic action as compared with toxic effects. The toxic action appears to be mainly an intensification of the depression of the central nervous system which in therapeutic doses produces nearly normal sleep; hence their hypnotic activity and their toxicity must run closely parallel, so far as the central nervous system is concerned. An experimental study of a number of hypnotics of the barbital series on cats showed that none were much more actively hypnotic in proportion to their toxicity than barbital. Of the five hypnotics examined, none exerted marked analgesic effects with less than 30 per cent of the average fatal dose. None of the hypnotics produced any uniform change in the heart rate or respiratory rate. From this study one does not gain the impression that any of the substitutes possesses all the advantages and none of the disadvantages of the official barbital. Probably the actual toxicity for man is nearly proportional to the hypnotic action. (J.A.M.A., August 11, '28).

—R—

### Small Doses Effective

When we say that one ten-thousandth part of a grain of Adrenalin is sufficient

to produce a physiological effect when administered to an adult, we are in the region of the infinitesimal. Adrenalin as used in medicine is never more than one-thousandth of the strength of the original; the best known commercial product is Adrenalin Chloride Solution 1:1000; ampoules are offered containing solutions of 1:2600 and 1:10,000; and for certain uses the strength may be not more than 1 to 100,000. It is no wonder, then, that Adrenalin has been found capable of reviving the heart action in cases of apparent death, when injected directly into that organ; that it is always thought of in cases of collapse; and that in the paroxysms of asthma it has long been the sufferer's only hope. Adrenalin, by the way, is a Parke-Davis discovery. Takamine, of the Parke-Davis staff, the first to isolate the pure active principle, made his announcement in April, 1901.

Literature on Adrenalin is offered to physicians by Parke, Davis & Co.

—R—

#### **To the Medical and Surgical Profession**

The System of Camp Physiological Supports is now used and highly endorsed by many doctors and surgeons in all parts of the world. This system is no doubt familiar, in name at least, to many others who have not yet investigated its merits, but who need efficient supports in their practice and would be interested and glad to learn of a thoroughly competent, practical line of wearable garments—quickly available.

We are presenting them in separate illustrations and brief descriptions through this and other well known Medical Journals in a series of advertisements showing the varied character of designs.

Camp supports embrace a full line of (typed to figure) maternity and convalescing garments. They also cover a wide scope of post operative supports, and supports for specific uses as aids in treatment of ptosis, hernia, sacro-iliac sprain, and spinal diseases.

All of these garments are to be found in surgical houses and high class department stores in the corset section, where a surgical service is established with trained fitters in attendance. Full in-

formation may be obtained by writing to S. H. Camp and Company, Manufacturers, Jackson, Michigan. They will be glad to send an instructor, a trained nurse, to demonstrate the full line of models and explain their uses to you.

—R—

#### **Clinical Congress of Physical Therapy— Seventh Annual Meetings American College of Physical Therapy**

Announcement is made of the third clinical Congress on Physical Therapy in conjunction with the seventh annual meeting of the American College of Physical Therapy, to be held at the Hotel Stevens, Chicago, October 8 to 13, 1928. For the past year plans have been under way to make this 1928 Congress the most interesting one ever conducted and one which will be difficult to surpass in the future. So many novel and attractive features have been injected in the six day program that no physician, whether he is now doing physical therapy or whether he plans to do it later, can possibly afford to absent himself from this scientific gathering.

Physicians, their non-medical assistants and technicians, and hospital executives properly vouched for, are invited to attend all sessions for which only a nominal registration fee will be charged.

#### **ATTENTION DOCTORS**

##### **Mail Us Your Notes and Accounts**

We can collect them. No fee charged until the collection is made. We make collections in all parts of the United States.

##### **Mid-West Collection Agency, Inc.,**

A Bonded Collection Agency

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**WANTED—Salaried Appointments for Class A physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.**

**HOSPITAL EXECUTIVE—Five years with one of the leading Hospitals of Kansas City as Office Manager and assistant to the Superintendent. At present Business Manager for an Oklahoma Hospital, one of the best in the State. Am an expert accountant, specializing in departmental distribution. Would like to make a change after September 1st. J. C. Aronhalt, 3955 St. John Avenue, Kansas City, Missouri, or Morningside Hospital, Tulsa, Oklahoma.**



# THE JOURNAL

of the

## Kansas Medical Society

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No. 10

### Treatment of Acute Middle Ear

L. B. SPAKE, M.D., Kansas City

Read before the Kansas Medical Society at its Annual Meeting, May 8-10, 1928, at Wichita, Kansas.

In the treatment of an acute middle ear, we have two main factors with which to deal.

1. Bacterial
2. Anatomical

**Bacterial.** We must first take into consideration the virulence of the organism, and the general resistance of the patient. If the microorganism is feeble, we have a catarrhal middle ear, while if the microorganism is virulent, the reaction is more intense and suppuration takes place, involving the mucous membrane, sub-mucosa and periosteal layers, and not infrequently the bone, while extensions and complications are usual.

The exudate as formed fills the tympanic cavity, and its only means of escape is through the eustachian tube, which is generally occluded by the acute infection; or by bulging the ear drum, which ruptures, or should be incised early, although there may not be spontaneous rupture of the drum, the only drainage being through the eustachian tube—and with marked symptoms, generally found in infants under three years, which causes what is so many times called primary mastoiditis.

**Character of exudate—by Herman.** Streptococcus and staphylococcus, pus has a yellowish tinge. Tuberculosis, greenish yellow aqueous color. Streptococcus hemolytic, thin, watery discharge.

**Anatomical—Poltzer** says that acute otitis media is not only of middle ear and attic, but of middle ear and mastoid process. There is a close relationship of the type of mastoid cells to prognosis, in acute middle ear infection.

(a) Pneumatic type of mastoid cells, large cells and have thin walls with

mucous membrane lining and are the most dangerous type.

(b) Diplocic, small cells, and filled with bone marrow, fat cells, and leukocytes which can help take care of infection.

(c) Sclerotic, hard like ivory, few small cells.

### SYMPTOMATOLOGY

The ear may be involved in any general disease, so a routine examination in infectious diseases of childhood would probably save much pain and many lives. In children under three years the symptoms are so variable that no set rules can be laid down. Fever may or may not be present. If there is sufficient eustachian drainage the general symptoms will be mild. When the exudate is under pressure, earache, high temperature, deafness, tinnitus, vertigo, headache, restlessness, increased pulse, convulsions, coma, vomiting or meningeal irritation may be present.

The cholera-infantum syndrome seen in infants; there occurs loss of weight with more or less serious gastro-intestinal symptoms from time to time; in severe cases, marked loss of weight, vomiting, diarrhea, anhydremia, extreme toxicity, and a septic temperature, which may go to 104°-105°.

### TYPES OF INFECTION—PROFESSOR RUTTIN

#### CLASSIFICATION

I. Noncapsulated type—Streptococcus, pneumococcus, I, II and IV, micrococcus catarrhalis, diphtheria bacillus, and influenza. Staphylococcus has been found in pure culture, but is considered by some to be due to change in primary infection.

**First Stage—**Pain in ear and over mastoid with redness of Shrapnell's membrane, with serous exudate; 24 to 48 hours.

**Second Stage—**Red bulging drum with white spots of epidermis. Pain subsides.

Ruptured drum, feels full, pulsating, slight deafness; lasts two weeks.

Third Stage—Muco-purulent secretion. No pain, feels full, deafness. May have pulsation lasting from two to three weeks.

Fourth Stage—Catarrhal stage. Healing stage, no discharge, the drum is still red, retracted, and hearing still impaired.

(a) Pain increases, headache, unilateral, streptococcus hemolyticus or bacillus influenza. Posterior superior canal wall sagging, increased temperature, over  $102^{\circ}$  means complication.

This type is of a fulminating character. Seen in last ten years during the influenza epidemic, also seen in scarlet fever cases, characterized by sever pain, which is usually referred not only to the ear, but to the whole side of the head, where attendant pain is but slightly relieved, if at all, by rupture. The discharge consists of a serous liquid, rather than pus, and is so copious that it soaks the dressings laid upon the ear. Temperature is higher than usual,  $102^{\circ}$  to  $106^{\circ}$ , and continues after rupture. There is a great tenderness over the mastoid region, and the skin around the ear is hypersensitive to touch. The general condition of the patient is that of severe septicemia. In this type of case the mastoid should be opened at once; that is within the first two weeks. Never open the mastoid before the end of first week, as the resistance of the patient to his infection will not have taken place, and healing of wound will be delayed, also lateral sinus thrombosis is more prevalent in the too early operated cases.

(b) Thick purulent discharge. Prolonged over a period of six weeks or more, with increased temperature, always means complication; chills, swelling behind the ear, calls for a mastoidectomy. When discharge continues for over six weeks, without symptoms, look for infected tonsils and adenoids, or para-nasal sinus infection.

II. Capsulated bacteria streptococcus mucosa. Diplococcus lanceolatus.

1. The original attack is mild, but little pain, little or no fever, ear drum is slightly reddened; may be overlooked, and a slight amount of discharge.

2. After the first 24 to 48 hours latent

boric acid or normal saline solutions are stage, there is no pain. Has a dead feeling over the side of the head, one-half out of order. Tinnitus, slight deafness, drum red or red gray, no transparency. Patient's general condition is bad, feels conscious of his ear, but may go weeks before he complains of his condition.

3. Stage of complication. Lateral sinus thrombosis, labyrinthitis, meningitis, brain abscess, general septicemia or pyemia.

Smear. 1. Methylen blue—Stain streptococcus, non-capsulative.

2. Carbo-fuchsin—Stain diplococcus.

3. Fresh water solution. Theonin, stain capsules.

Operate cases of streptococcus mucosa, before third week.

In rendering a prognosis the difference between the presence of capsulated and non-capsulated organisms makes it imperative to ascertain the causative organism in acute otitis media.

In case of earache without bulging drum, the adult should have calomel and saline purgative; the child calolactose, instillation of warm glycerine, and carbolic, and hot application to mastoid region.

If no improvement within twelve to twenty-four hours, the drum should be incised when ever there is an evidence of bulging. The operation is performed under an anesthetic, as nitrous oxide or ethyl chloride, but generally by local; using Bonain's solution, painting only a quadrant of the drum to be incised.

Pure Phenol—

Menthol—

Cocain Hydrochloride aa dr. 1.

The incision is made from below upwards in the posterior quadrant. Pus is seldom seen at the moment of the incision, unless the case is of several days duration. We generally tell the patient that at the end of twenty-four hours the discharge will be of purulent character.

Hot irrigation of bichloride of mercury solution 1:5000 is used within the first hour, to remove the blood clot which may form in the incision. Bichloride is not recommended for continued use, as it may cause the edges of the incision to become irritative, and delay healing. Hot



advised to keep the canal clean, and avoid secondary invasion of bacteria.

Treatment of the naso-pharynx is treating the primary cause of the otitis, which most commonly is due to acute naso-pharyngitis, tonsillitis, or some infection in Waldeyer's ring.

1. Ephedrine compound inhalant, 1 per cent solution. Two to four drops in each nostril four times daily.

2. Wait 20 to 30 minutes, instill three to five drops in each nostril of a 10 per cent to 15 per cent solution neo silvol, solargentum or argyrol.

3. Wet or dry ear treatment—Irrigate with warm boric acid or normal saline solution to cleanse the external canal.

Dry treatment—Gauze wicks are saturated in boric and alcohol solution, and are kept in the canal until saturated, then changed.

4. After the acute symptoms have subsided the use of mild suction treatment, entirely cleansing the middle ear of its secretion, promotes healing and drainage.

#### CONCLUSIONS

1. All acute discharging ears should be cultured, especially where initial symptoms are alarming.

2. In questionable cases, *x*-ray mastoid, always *x*-ray before mastoidectomy.

3. Rule out middle ear infection in cholera-infantum syndrome in infants.

4. Naso-pharyngeal treatment of all cases of acute otitis media.

5. That all cases where capsulated organism is found should be operated before the third week.

—R—

#### Fusospirillosis

L. P. WARREN, M.D., Wichita, Kansas

Read before the Kansas Medical Society at its Annual Meeting, May 8-10, 1928, at Wichita, Kansas.

Fusospirillosis is decidedly the best name for the disease entity to be discussed in this paper, because all its synonyms have reference to a disorder of the mouth and throat, such as ulcerative stomatitis, fetid stomatitis, putrid sore throat, diphtheroid angina, ulceromembranous tonsillitis, ulcerating lacunar tonsillitis, Vincent's angina, while *fusospirillosis* embraces all the foregoing and all other locations of the disease as well.

#### DEFINITION

An acute, inflammatory, ulcerative infection of the mouth and throat particularly, but may be found on any mucous membrane of the body.

#### HISTORICAL

It is quite probable that when Lewenhoeck, in 1683 with his crude combination of lenses, brought into view the organisms found in the tartar from the teeth, what he saw and described was what is now known as Vincent's bacillus. It was, in all probability, the first micro-organism seen by the human eye.

Rauchfuss wrote of this disease in 1893. Plaut, in 1894. The original communication of Vincent was published in 1896.

Military campaigns have often been accompanied by fusospirillosis as a formidable and disabling disease. Hospital gangrene was the name applied to it during the Crimean war, at which time it was thought to be caused by unsanitary conditions and filth, and the surgeons cured it with a red hot iron. Vast numbers of cases were seen in our own Civil War and in the Franco-Prussian outbreak. The World War saw the disease constantly present and a source of much invalidism from the so-called "trench mouth"—which was an ulcerative stomatitis and gingivitis. Prior to the World War the condition was relatively uncommon in this section, so that when a case was diagnosed we were wont to call in our colleagues and show the case. Since the return of the A. E. F. cases have been so numerous that we no longer comment on it

#### BACTERIOLOGY

The bacillus of Vincent is fusiform, pointed at the ends and somewhat bulging in the center. It is longer and broader than the Klebs-Loeffler. It takes the ordinary basic stains, being well outlined with fuchsin and methylene blue. Vincent's can be grown with difficulty on the ordinary media to which has been added blood serum, ascitic or hydrocele fluid. The spirillum denticola is always found with Vincent's: this spirillum is long and thin; it does not stain so readily as the bacillus and can be grown only under anaerobic conditions.

In the New York Medical Journal,

December 7, 1901, there appeared an article by Dr. Jacob Sobel and Dr. Charles Hermann, the first article in English, in America, at least, in which they stated "Notwithstanding the difference in size and shape, it is highly probable that the fusiform bacillus and the spirillum sputiganum are identical. Observations of transitional forms which we have made in our series of cases would seem to indicate that there is a genetic connection between the fusiform bacillus and the spirochete."

#### ETIOLOGY

It is believed that symbiosis of bacillus fusiformis, or Vincent's bacillus, and the spirillum denticola, is required to produce the symptom complex of the disease. It is contended by some that the bacillus fusiformis and the spirillum can be found in any ulcerative surface in the mouth and that, while they are always present and always predominate in fusospirillosis, the infectivity of the disease has not been proven.

Authors stress insanitary surroundings, debility, poor feeding, modified or lowered resistance as predisposing factors. DaCosta claims fusospirillosis may develop during the course of any acute febrile disease such as measles, scarlet fever, typhoid and other infections, also that it may invade tissues where resistance has been lowered by mechanical or chemical irritation.

Creighton Barker declares the disease is transmissible by contact as well as by the use of contaminated articles, such as eating utensils, pipes, musical instruments, drinking cups, etc.

We know that the germs are found in mouths that show no disease, so that it may be spread by healthy carriers. Barker asserts that in 30 per cent of the cheesy masses found in the crypts of the tonsils the organisms are present. But he adds that some investigators have claimed these germs have a motility not found in Vincent's, and are, they think, a different form.

We know, however, that under different conditions bacteria undergo morphological changes, which do not wholly alter their form or their ability to produce disease, though it does make them somewhat different.

Fusospirillosis exists in worldwide distribution.

#### PATHOLOGY

Again quoting Creighton Barker: The pathology of the disease may be divided into three stages.

First, the onset—characterized by oedema and congestion.

Second, formation of the pseudo membrane.

Third, the period of ulceration.

It is not possible to separate or distinguish by any sharp line of division these stages in any given case, yet it is the course followed by the infection in whatever part of the body located.

#### SYMPTOMATOLOGY

Although most often found in the throat and mouth, fuso-spirillosis may attack any mucous membrane in the body. It is not at all uncommon about the genitals. Ulceration of the labia and sloughing of the vulva and perineum are not rare. Endometritis, with a pelvic peritonitis due to the micro-organisms has been reported. One case of brain abscess, as well as two cases of death from meningitis, has been seen. Industrial wounds may harbor the germs as a complicating feature, or they may be the sole cause of failure of repair.

While not a primary cause of otitis media, except very rarely, the germs have been frequently seen taking an active part in the process. A brownish discharge, when not caused by medication, with a fetid odor should arouse our suspicions.

An infection of the external auditory canal with fusospirillosis was followed by great destruction and deformity in one reported case. Very recently it has been reported that a spiral organism similar in morphology has been found in epidemic mumps.

The usual sites chosen for the active manifestations of the disorder are the tonsils, and the edges of the gums, though extension to the soft palate and the buccal mucosa is common. To the larynx, rare. The areas named may all be involved simultaneously, or extension take place day after day into new fields.

A distinguishing and very suggestive sign in fusospirillosis of the tonsil is



that in a very large percentage of cases the disease will be manifest in one tonsil, the other apparently unaffected. A dirty gray, with sometimes a greenish tint, sloughing patch, covering part, occasionally all of one tonsil, with a fetid disgusting odor, a moderate pain upon swallowing, enlarged lymph nodes on the affected side, a bleeding base when the membrane is removed, the membrane quickly reforming, with a noticeable daily loss of tissue in untreated, or improperly treated cases, about completes the picture of fusospirillosis in the throat. A direct smear will in the majority of instances leave no doubt as to the condition present.

It is possible to confuse fusospirillosis with diphtheria, syphilis and follicular tonsillitis. It is not beyond the range of possibilities to have two or more of the infections present at the same time. The germs have been found in a case of lues that had been having regular doses of salvarsan. Proper staining and a microscopic examination will guide us aright as far as Vincent's is concerned. A dark field illumination will often help to differentiate suspicious throat lesions. The spirillum of syphilis is like a corkscrew, while the spirillum denticola presents longer and more undulating curves. In uncomplicated cases of fusospirillosis the Wassermann is negative.

Diphtheria ordinarily presents more severe systemic symptoms added to which there is the easy growth of the Klebs-Loeffler bacillus while its distinguishing counterstaining gives us a rather clear guidance in the diagnosis.

Follicular tonsilitis is nearly always bilateral; with marked distress on swallowing, high temperature, great general bodily discomfort, redness and swelling of the tonsils, and many crypts with occluding membranes, with only moderate enlargement of the anterior cervical lymphatics.

In infections of the vulva the type of lesion is very constant, presenting deeply excavated areas with the described membrane and rather severe lymphatic involvement. The same conditions exist in vaginitis and balanitis gangrenosa when due to fusospirillosis.

In pulmonary abscesses, especially

those following tonsillectomy, there can frequently be demonstrated Vincent's or an organism of striking similarity. As such germs are so often present in the cheesy masses found in the crypts of the tonsil we are justified in assuming that the aspiration of such masses into the lung during tonsillectomy gives rise to the abscess rather than accept the theory of some who maintain that infection takes place through the blood stream. The careful removal of all material expressed from the tonsil before closing the snare to enucleate is at least a worth while precaution, as we know that the suction machine does not remove everything squeezed out of the tonsil during operation, no matter how thoroughly used.

#### PROGNOSIS

With the exception of lung abscess and otitis media, the prognosis is good as far as the initial lesion is concerned, regardless of the location of the infection. The disease is never primary in the brain or meninges. It may recur many times in its primary location in the throat or mouth, due to some untouched infective material remaining. The individual should be seen frequently for a fortnight after apparent healing.

#### TREATMENT

The general treatment would depend, obviously, upon the severity of the case. Patients showing marked or grave symptoms should be put to bed. Most cases may be treated as ambulant, coming to the office for attention. Sometimes the gums and cheek are so sore that eating is painful. Here we may use a solution of butyn, or a tablet of anesthesin held in the mouth affords some relief. Cold liquids are taken with less distress than anything. Eggs, jelly and other foods are to be added as the condition improves.

The patient's tooth brush should be destroyed. All table utensils should be boiled. Towels used by no one except the patient. Obviously kissing is forbidden. Diseased teeth which are beyond repair should be removed. There exists no specific quarantine law against the disease, and as far as I know it is not a reportable infection.

Nearly all the antiseptic drugs have

been tried in the treatment of this disease. Many with indifferent success, others proving miserable failures. The use of these medicaments was without full knowledge of the infective agents' habits and requirements—was not, therefore, logical treatment. Whether the germs are always identical in form and morphology or not is not relevant.

We know that at least one is anaerobic; therefore the presence of oxygen in excess should prove discouraging to the invader. In practice this is true. We can furnish oxygen in quantity by using two drams of sodium perborate to a glass of water as a gargle or mouth wash. Hydrogen peroxide in one-half to full strength dissolves the exudate and helps combat the disease. As we know arspphenamin is antagonistic to spirillae, it may be applied after removal of the membrane in 10 per cent solution in glucose, with beneficial effects.

The ordinary dose of arspphenamin, or neo, by vein is indicated in intractable cases and in those with inaccessible foci deep in the tonsil, or other parts. The organism is found in greater numbers in the base and edge of the ulcers than elsewhere, hence these places must be reached in our topical applications or disappointment follows our efforts, regardless of the medicine used.

Infections between the teeth should be treated by drawing woolen cords saturated with the medicine of choice, between the teeth and leaving them there for half an hour, after sawing them back and forth.

In otitis media complicated by fusispirillosis, treatment is best carried out by cleansing with hydrogen peroxide, drying with cotton applicators, after which powdered salvarsan is blown through the perforation if possible.

Dr. Samuel McCullagh, in 1924, before the section on Laryngology and Rhinology of the N. Y. Academy of Medicine, reported four cases which cleared up rapidly under the insufflation of powdered aspirin into the crypts of the tonsil, combined with its use as a gargle. The essential point of how he was able to blow the aspirin into the crypts of the tonsil he left undescribed. If he meant to cover the tonsil surface with the pow-

dered drug, I can see how it could be easily accomplished, but to blow it, with safety, into the depths of the crypts is almost impossible.

Dr. George D. Wolf, at this same meeting, reported a Vincent's in a six year old, with some bleeding from the throat, who died in four days, from lymphatic leukemia, confirmed by antemortem blood count and post mortem examination. Whether the leukemia was a result of the Vincent's or whether it was just an incident superimposed upon the leukemia, the doctor did not say.

Dr. McKenty told of two fatal cases he had seen with deep ulceration of the throat, and death within six weeks.

In 1918 Gallaher of Denver, in a published statement, in *The Laryngoscope*, says "In looking over the latest bibliography in regard to Vincent's angina, I find a great many remedies recommended, but no mention made of one remedy which we have used for many years with remarkable success. I have no hesitation in pronouncing trichloroacetic acid a specific for the disease. It should be applied pure. After the parts are turned white it should be neutralized in one or two minutes with sodium bicarbonate. Treatment to be repeated in two or three days if necessary. An excess of acid must not be used and none permitted to fall into the larynx."

Editorial exception to Dr. Gallaher's statement cites references in the literature on trichloroacetic acid in Vincent's and comments further in this language, "Like every other remedy that has been proposed, this drug has been used with varying success."

In the March, 1925, *Laryngoscope*, Dr. Van Poole of Honolulu, reported two cases of fusospirillosis following local tonsillectomies. On the third day the patient complained of severe pain in the left side, and that all food was very irritating. Upon examination he found the tissues simply melting away at the upper end of the wound. Swab smear showed it to contain Vincent's, and the surface was covered with neo salvarsan which was repeated every two hours by a competent nurse and the patient was given neo by vein. In spite of treatment the uvula was clipped off by the disease. The



voice is natural, no difficulty in swallowing, though there is an ugly deformity of the throat. In the second case severe pain came on after three days as in the first. Vincent's was demonstrated, but in this instance he did not use neo. Instead he applied 1 per cent brilliant green—and 1 per cent crystal violet in 50 per cent alcohol, under which the disease did not spread and recovery was complete in nine days.

In November 1927, Dr. George W. Davis, Ottawa, Kansas, reports a case of trench mouth exhibiting great exhaustion and grave systemic manifestations which he treated with diphtheria antitoxin, administered in daily doses of ten thousand units, except the last dose of five thousand units. In his article he states that smears were taken but does not advise whether an attempt to culture was made. It would seem that there might have been a mixed infection which, perhaps, could have been shown had culture been undertaken. Granting, however, that it was a case of fusospirochilosis, he may have hit upon a very valuable treatment, without it being clear how the cure was brought about, except as one might expect benefit from a foreign protein. That point is of no interest to the patient, who cares nothing at all about the *modus operandi* of cures.

For a long time my personal experience with the treatment of fusospirochilosis was very unsatisfactory. A variety of antiseptics were used by topical application and gargles were given. None of these gave the result desired by patient or me. Somewhere, I cannot recall where, I read a very brief article stating that copper sulphate 10 per cent solution applied to the lesion would cure Vincent's angina. I regret exceedingly that I cannot publicly thank that doctor by name for the article, for it has been with the greatest satisfaction that I have used the treatment for several years. There has been one failure. In that case it was not possible to apply the solution to the depths of the tonsil crypts and no lasting benefit was secured until I removed a pair of greatly hypertrophied tonsils and a small adenoid whereupon the process rapidly cleared up, including the gum lesions.

The treatment, as I administer it, consists of a thorough rubbing of the part with an applicator saturated with 10 per cent copper sulphate, until all membrane is rubbed off, leaving a bleeding surface upon which a second application is at once made, but a little less vigorously.

If the swab contains an excess of the medicine or several applications are made at one sitting the patient will, in all probability, vomit, for as you know copper sulphate is a prompt and highly efficient emetic.

I presume that there is no such thing as an 100 per cent therapeutic measure of any nature whatsoever, but except in lung abscess and perhaps otitis media, I can see no contra-indication for the use of this medicine which is so nearly a specific. I refrain from saying that the exception proves the rule, for to me the statement is an absurdity, as any exception to a rule lessens the certainty of the rule just that much.

I do not believe that unsanitary conditions play any very great part in the production of this disease. At least 95 per cent of my cases have been in clean, well nourished males, very few females or children. It is the only form of sore throat I have ever had, but I have had it twice, and each time it was cured very quickly with copper sulphate, 10 per cent solution.

#### ADDENDUM

Since the foregoing was written, and less than a week after it was presented to the Kansas State Medical Society, there came under my care a seventeen year old boy, who had had one year ago a removal of the tonsils, with no apparent tags or remnants left. His older brother had developed, a week previous, a fusospirochilosis around the gums. When the younger boy showed a very slight evidence of gum involvement he was sent at once to the dentist, without laboratory examination, as had been made on the older boy. About three days after the gum lesion the younger boy complained of "one side" sore throat, pain upon swallowing, enlarged lymph node under the angle of the jaw and malaise. Very tired. Noticeable bodily weakness and depression. Skin was dusky and there was evident toxemia. The real lesion

was not discovered until hemorrhage set in on the fourth day, although the mouth and hypopharynx was inspected daily. Bleeding was found to come from a small, typical ulcer far down in the left side of the throat in a fold of mucous membrane on a level with the epiglottis.

Copper sulphate 10 per cent was rubbed thoroughly over the ulcer and a second swab of the same was applied in a few minutes, after which bleeding stopped, and did not recur until ten o'clock that night. An hour was spent at midnight that same night and adrenalin finally controlled the very persistent bleeding, which at no time was profuse. Evidently the hemorrhage came on again as soon as the effect of the adrenalin wore off for the boy had two large, very black, offensive stools, early next morning, and the throat was bleeding at that time. I saw him and gave him fibrogen by mouth at eight o'clock and in addition used ephedrin soaked sponges with pressure, for an hour, when the bleeding ceased. At ten o'clock he was given another oral fibrogen, and again at three o'clock p. m. In addition he was given fifteen grains of calcium lactate every three hours. There was no further hemorrhage. The boy lost six pounds in weight and there was a distinct anemia. No blood count was made. No smear made or culture attempted. It is impossible to say that there was no streptococcus haemolyticus as a complicating feature. The blood was bright and seemed slow to clot, though there is no tendency to undue bleeding in this boy, as he has had many wounds and several operations with no complication of that sort. No further application of copper was made to the ulcer and recovery is, apparently, complete.

This is the only case of hemorrhage accompanying fusospirillosis I have seen.

—————R—————

### Was Ambroise Pare a Murderer?

THOMAS G. ORR, M.D., Kansas City, Mo.

Read before the Jackson County Medical Society, Kansas City, Missouri, April 17, 1928.

"Sleeping within my orchard,  
My custom always of the afternoon,  
Upon my secure hour thy uncle stole,  
With juice of cursed Hebena in a vial,  
And in the porches of my ear did pour

The leperous distilment; whose effect  
Holds such an enmity with blood of man  
That swift as quicksilver it courses through  
The natural gates and alleys of the body,  
And with a sudden vigor it doth posses  
And curd, like eager droppings into milk,  
The thin and wholesome blood."

In a reference to this ghostly speech to Hamlet in a little volume of the Arden Shakespeare, I found the following notation: "Ambroise Pare, a surgeon, was suspected of having poured poison into the ear of Francis II when he was dressing it."

In order to determine if there may be a semblance of truth in this accusation let us review in brief the character, works, and reputation of Pare with an estimate of the spirit of the times in which he lived.

In the 16th century France was in constant turmoil. War followed war, intrigue succeeded intrigue while kings, queens and princes were the pawns in a great game of politics and religious intolerance which made intellectual thought difficult and even life itself a gamble. It was during this time that Catherine de Medici wielded her degrading power which finally culminated in the horrors of the massacre of St. Bartholomew. Catholic and Huguenot were at sword's points of religious fanaticism to such an extent that justice was a farce and religion a travesty. Into this maelstrom of unrest in the year 1510 was born Ambroise Pare, the son of a village cabinet maker. Because of his humble birth, he was without educational advantages or political preferment and therefore had his future to carve strictly by his own efforts from a world singularly free from sympathy and respect for individual human effort. Pare was early apprenticed to a priest to learn Latin. He has stated himself that he learned the tongue of science by cultivating the garden and taking care of the mule of the priest. The fact that he knew no Latin was to be a burden and embarrassment to him throughout life because the opinion among scientists at that time was that work of scientific merit was never written or studied in any language but Latin. To write scientific papers in French was not only the height of vulgarity but beneath the notice of the medical profes-



sion. In spite of this general fact Pare was destined to force notice upon the elite of science by his skillful work and many practical contributions to medicine and surgery.

Pare began his professional life as a barber surgeon. He probably first studied with his brother Jean, who was a master barber surgeon. The medical profession in Paris at that time was divided into three classes: the first or *Faculte de Medicine*, second or surgeons in the *Confrerie of Saint Come*, ordinarily called surgeons of the long robe, and third, or lowest class, the barber surgeons. Pare then began his medical career in the lowest class of the profession. But he was not a man who permitted obstacles to interfere with his progress. His estimate of his own ability was high and tinged with some degree of egotism as shown in his later writings. It is probable that his aggressiveness and disregard for scientific decorum scandalized the staid members of the *Faculte de Medicine* and led them to bitterly oppose him as a quack and imposter. To suspect him beyond the pale of medical ethics of his time is not to stretch the imagination to any extent.

Pare's progress was certainly aided by his good fortune in attracting the favorable attention of royalty. He was in the service of four successive kings of France and was probably saved from death at the massacre of St. Bartholomew's day because he was a favorite of Charles IX. He was the only protestant of any prominence to escape death at this time. This prominence given him by his associations with kings and princes no doubt increased the scorn of the regular medical profession not so fortunate. He was many times, of course, called upon to treat the royal family and living in an age of suspicion and distrust may well have been maliciously accused of acts intended to degrade him in kingly circles.

Pare was a military surgeon for 33 years. It was probably in this capacity that he reached the height of his greatness. He took advantage of his many opportunities to do the surgery incident to war and because of his unusual energy and ability naturally attracted the atten-

tion of the great. It is said that so widely known was his fame that even the common soldiers went into battle more willingly when they knew Pare was present to care for the wounded.

Pare was said to be pious and often prayed for the success of his operations. The expression by which he is probably best known is the oft repeated remark that "I dressed his wound and God healed him."

Superstition was the order of the day in sixteenth century France and Pare had his share. He believed in astrology, magic, witchcraft and the royal touch; he accepted the statement that Joshua made the sun stand still and he had no doubt that strange monsters, half human and half animal, walked the earth, the offspring of copulation between man and beast. He acknowledged disease cured by spells and writes that "I have seen the jaundice disappear from the surface of the body in a single night by means of a little cachet suspended to the neck of the patient." He also notes an instance when hemorrhage was checked by certain words spoken in Latin. Prenatal impressions were to him an established reality. The subject of sex change also occupied the thoughts of Pare and he apparently believed that there were cases in which the female became changed to a male. He relates the strange case of Marie Germain, who was regarded as a girl until fifteen years of age when after a hard run the true sexual characteristics suddenly developed and she was found to be a male. In his work on monsters he cites the case of an Italian woman, who gave birth to twenty children at two births, nine at the first and eleven at the second. Not being satisfied with this he records the case of Countess Virbostans who, at one accouchement, produced 35 living children. And he did not end his remarks with "believe it or not," but influenced by the spirit of the times accepted it as true.

Pare rapidly developed into the greatest surgeon of his time—some even have said the greatest of all time. He wrote a short treatise on war wounds at the age of 28 and later published a *Compendium of Anatomy, Wounds and Fractures of the Human Head, Universal*

Anatomy of the Human Body, Ten Books of Surgery, Treatise on the Plague,, Small pox and Measles, Two Books of Surgery, On Mummy and Unicorn, Book of Monsters, Treatise on the Pest, and at the age of 75 wrote the Apology and Treatise containing The Voyages made into Divers Places.

He was a keen observer, a tireless worker and an exhaustive writer. His works on surgery were standard for a hundred years after his death. Like a true surgeon his studies were not all on surgical subjects. The infectious diseases, the plague and syphilis, of which he has so well written, attracted much of his attention. Pare's surgery is probably best known by his use of the ligature in amputations. His influence and practice resulted in the abandonment of one of the most cruel and useless treatments in all surgery, the cauterization of wounds with boiling oil. The fallacy of this treatment was brought to his attention on the battle field when he ran out of oil because of the great number of wounded to be treated. To stop hemorrhage he applied the ligature instead of oil and found to his surprise that the patients thus treated had much less pain and infection and healed more rapidly. Pare's thought, practice and writings were often revolutionary. The conservative in science of all ages have been inclined to question unusual innovations and Pare met with his share of obstacles. He was constantly harassed by the Faculte de Medicine and especially by its dean Etienne Gourmelen, who stigmatized Pare as a blood-thirsty cruel rascal. In his declining years and final writings Pare retaliated with many passages of biting scorn which showed the effect that the abuse of years had made upon him. His repeated sarcastic reference to Gourmelen as "mon petit maistre" revealed the contempt in which he held him.

Remarkable descriptions of syphilis, gout and measles came from his pen. He improved the truss, first lanced the gums for difficult dentition, operated for hare lip, extracted loose bodies from the knee joint, devised the method of reducing dislocated shoulder by putting the foot in the axilla and making traction on the

arm, advocated the use of bandages, discovered that a child with cleft palate could speak better with a spoon in its mouth and as a result invented a metal obturator, improved the trephine, sutured tendons, exploded the idea that bullets fired from a gun were red hot and burned the flesh by firing a few shots into bags of gunpowder, amputated the uvula, used specially designed shoes for club feet and flat feet, invented a metal corset for spinal deformities, resected joints for ankylosis, invented instruments for raising depressed bone and removing fragments, studied the remote effects of brain injuries, used posture and bandages for varicose veins, drained empyema low down in the chest, punctured intestines to let out the gas before replacing the viscus, invented bougies for strictures, maintained that insects and animals spread disease, decided that bleeding in plague was objectionable, collected many curios and monsters, had an extensive library and was a man of means.

It is said that he operated upon many defects amenable to plastic surgery. The most remarkable bit of such surgery attributed to him was an operation upon King Henry II for sterility. This king was supposed to have had an abnormality which resulted in a childless marriage with Catherine de Medici for 10 years. After the operation followed a child a year for ten years with a miscarriage the eleventh. This plastic operation then gave to France three Kings, Francis II, Charles IX, and Henry III with the addition of Elizabeth, Queen of Spain, and Margaret, Queen of Navarre, wife of Henry IV afterward a King of France. Pare must have in that early time keenly appreciated the possibilities of plastic surgery.

Could a man with such ability, such knowledge and such vision have been led by political or religious pressure to have committed a royal murder? Does a study of his character warrant the suspicion of such a weakness? There is but one blot in recorded history that might suggest such a cold blooded tendency; but in justice be it said that this was shown toward an enemy people and against individuals of questionable character. This



occurred at the siege of Hedin in 1553. A great many women followed the army who were a constant source of annoyance to Pare. On an occasion a group of these camp followers were gathered about a well within range of the French cannon and Pare urged the captain of the artillery to fire upon them. This for a time was refused on the ground that their destruction was not worth the waste of ammunition. He finally consented and 15 or 16 women were killed.

According to Balzac it is certain that during the 16th century and the years that preceded and followed it, poisoning was brought to a perfection unknown to modern chemistry. To Italy he gives the credit of inventor and mistress of these secrets. Poisoning was the passion of the age. As an example of the horrible art a Florentine woman divided a peach with a certain duke, using a golden fruit knife with one side of its blade poisoned, ate one half of the peach herself and killed the duke with the other half. A pair of perfumed gloves were known to have infiltrated mortal illness through the pores of the skin. Poison was instilled into branches of natural roses, and the fragrance, when inhaled, gave death. Don John of Austria was poisoned, it was said, by a pair of boots. Whether the statements made are strictly true or not makes little difference since it is well known that they were bad enough and his remarks fairly represent the turbulency of the times. Balzac somewhere remarks that "historians are privileged liars" and presumably approaches historical facts from the standpoint. He describes the death scene of Francois II, I believe more accurately than if he had actually been present.

While Mary, Queen of Scots, the imported wife sat by the bed of the unconscious King the three court physicians and Ambroise Pare consulted near her. The latter held in his hand an instrument which he had fashioned the night before to trephine the skull for a brain abscess resulting from an ear infection. Catherine de Medici, the queen mother, stood near gazing from the window of the bed chamber thinking not of the King's life but how best to enhance her own power through the King's death. Nobles, cour-

tiers and priests were present, all with a keen eye open for any change in the political situation that might effect their future lives and fortunes. To operate or not to operate was the death chamber discussion. Ambroise Pare stood ready with trephine in hand. The young queen pleaded and even demanded that he proceed while the court physicians and Catherine objected and the latter warned him that if he operated and failed he would answer for the King's life with his life. The famous surgeon finally saw that death would probably ensue regardless of what was done and at length consented to an injection into the ear as recommended by the King's physicians. It was evident that Catherine wished her son, the King, to die so that her younger son Charles IX would succeed to the throne by which act she could regain much of her lost power. Pare made the injection into the King's ear but with no relief and death soon followed. It is easily understood how friends of the dead King would circulate a story charging Pare with regicide at the instigation of Catherine. It is easy to imagine the predicament of the surgeon as he stood waiting for a decision with full knowledge that if he operated and the King died that Catherine would have his head and if he did not save the King the ruthless queen mother, who would then regain power would put to the sword all those of Huguenot belief of which he was one. The love one has for life has often a strong influence upon his actions and did we not know the high and fearless character of Pare we might suspect him of some sinister act upon this unusual occasion. The historical evidence presented showing the righteousness and moral courage of the man, however, can lead only to the conclusion that the regicide Pare existed only in the malicious minds of his enemies.

Pare's character probably contained a little tendency towards charlatanism as judged by the highest class of medical men of his day, a constant wish to bask in the sunshine of royalty, a childish desire for self aggrandizement and an egoism, which may have been repulsive to his enemies, but was well supported by his accomplishments. These weaknesses

when balanced against his remarkably good qualities should be dismissed as of little importance. Few prominent men of any nation or time are free from minor blemishes if their intimate life histories are carefully sifted. If then, his good far surpasses his bad we should accept the former and forget the latter. We may thus forgive this great surgical benefactor any foibles that he may have had and remember him with Oliver Wendell Holmes as "Fine old Ambroise Pare, that quaint and delicious writer, the surgeon of princes and the prince of surgeons."

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### **The Leucocyte Count in Acute Appendicitis\***

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The annual death rate from appendicitis alone is equal to the combined death rate from salpingitis, pelvic abscess, surgical diseases of the thyroid, spleen and pancreas, from cholecystitis and ectopic pregnancy. Data from the Bureau of Vital Statistics show that from 1900 to 1922 the mortality rate from appendicitis has increased almost 31 per cent. From these facts A. M. Willis concludes that something is radically wrong with the modern surgical treatment of this important condition.

It is not the task of the pathologist to criticize operative measures, but he should be interested in the value of his cooperation with the surgeon. In the last four years I have been led to question more and more, whether the confidence of the physician in laboratory methods is fully justified and I feel reasonably certain that the reliance placed upon blood counts which today help to determine the diagnosis and indication for operation accounts for some of the present high mortality from acute appendicitis.

The fact that pyogenic conditions are accompanied by a leucocytosis has become so familiar to the modern physician that he rarely will make a diagnosis of appendicitis until the leucocyte count is known. He expects from this laboratory procedure information in regard to

the actual presence of acute appendicitis and if present whether or not the case is still uncomplicated by peritonitis.

Curschmann who introduced this diagnostic method more than 30 years ago based the diagnosis and prognosis of appendicitis directly on the degree of the leucocytosis. He distinguished:

1. Mild cases without or with slight leucocytosis.
2. Rather severe, non suppurative cases with leucocytosis up to 22,000.
3. Severe, suppurative cases with high leucocytosis (25,000 and above) which demand operation.

This extremely conservative standpoint has been abandoned long ago and no modern surgeon would wait until so pronounced a leucocytosis as 25,000 has developed, before he operates; in a recent paper Krecke emphasizes a white cell count over 15,000 as indication for operation. But also today it is generally agreed that the number of leucocytes is proportional to the severity of the appendicitis.

I experienced several instances where the operation was delayed at the most opportune time, because the leucocytosis did not harmonize with the other clinical data and confused the diagnosis. This fact was so much at variance with the accepted ideas on the value of blood counts that I was led to study the relation between the white cell count and the pathological diagnosis in acute appendicitis. This paper is based on the analysis of 160 cases which were operated upon within the last year at St. Francis Hospital, Wichita.

#### **METHOD**

Our pathological findings were grouped in the four following stages of Aschoff's classification.

1. *Primary lesion of the appendix.* The epithelial lining in one or several of the crypts is destroyed by bacterial toxins. Fibrin and leucocytes are filling in the defect. According to Aschoff this first stage of acute appendicitis ordinarily lasts only a few hours, rarely until the second day.

2. *Phlegmonous-ulcerous appendicitis.* From the primary lesion the inflammatory process spreads to the adjacent areas of the wall of the appendix. The

\*From the Pathological Laboratory of St. Francis Hospital, Wichita, Kansas.



epithelium and subepithelial tissue of the mucosa shows more extensive necrosis and leucocytes are infiltrating the submucous, muscular and also the subserous layer. In the lumen neutrophile leucocytes are found causing empyema of the appendix in case the lumen is closed at the base. The second stage is observed usually from the 6th until the 24th hour of the attack, sometimes as late as the second day.

3. *Severe ulcerous-phlegmonous appendicitis with beginning peritonitis.* The ulcerations extend so far as the muscular or the subserous layer. Smallest perforations of the serous cover allow the inflammatory process to involve the peritoneal cavity. When the appendiceal region is walled off by fibrinous adhesions a circumscribed peritonitis will result, otherwise the process will diffuse. Aschoff found this stage from 24 to 48 hours after the onset, often also on the third day.

4. *Large perforation of the appendix caused by deep ulceration or gangrene of the wall.* A wide communication is found between the lumen of the appendix and the peritoneal cavity. This stage is always complicated by a periappendiceal abscess or general peritonitis. It is seen as a rule on the third day of the disease, sometimes not before the fourth day.

There is of course no definite rule to tell us at what period these different stages will be encountered and we are against the opinion that peritoneal complications may not be expected before the 24th hour of the attack. We saw several adults with a history of being sick only 14 to 17 hours where large perforations had occurred. The generally known fact that in small children the appendicitis runs a much quicker course than in adults is most frequently explained by the difficulty of recognizing in them the true beginning of the disease.

#### DATA

The danger in appendicitis is that of peritonitis. In the first two stages of Aschoff immediate operation is regarded as the ideal treatment, because the risk of the operation is very small in the uncomplicated cases. After diffusing peritonitis has occurred, operation is not ad-

vised until the peritoneal inflammation has been controlled by anatomic and physiologic rest (Deaver). It is generally accepted that the involvement of the peritoneum is manifested by a marked increase of the white blood cells. Analysis of Table I shows that this is not the case. We found the highest number of leucocytes in the second stage of appendicitis where the inflammation is still limited to the wall of the gut. On further analysis of Table II it will be seen that a phlegmonous inflammation of the appendix with collection of leucocytes in the lumen, but without peritoneal complication increases the number of the white cells much more than the diffuse form. This suggests that it is not the collection of pus but the absorption of bacterial toxins that causes the high blood count and also that the leucocytosis represents the balance between the severity of the toxic irritation and the resistance of the bone marrow. Pronounced leucocytosis in the first three days gave a very favorable prognosis in our experience. All these patients made a prompt recovery after immediate operation. On the other hand our fatal cases did not show a high white cell count in spite of a general peritonitis (Table III). A marked leucocytosis in the beginning of an attack should never be interpreted as a sign of peritonitis. To advise at this time the "regulation" or Ochsner treatment, means only loss of valuable time.

The practice of deferring operation unless there is a leucocytosis and if comparatively low to wait for a rising count is equally wrong. We referred already to Krecke's standpoint in regard to operating for appendicitis when the leucocytosis has reached the 15,000 mark. Many of our cases with only 13,000 white cells had already definite purulent inflammation of the appendix. One patient had only 12,350 leucocytes in addition to distinct clinical symptoms 12 hours after onset of the disease. This low count caused a misleading sense of security and the operation was postponed until the next morning at which time a perforated appendix with peritonitis was found, much to the surprise of the surgeon. A leucocytosis as low as 8850 and 9950 does not exclude a ruptured appen-

dix and is an ominous sign, if found together with severe clinical symptoms. But here also hope need not be abandoned. Two such patients of ours recovered after immediate operation.

Other acute abdominal conditions that make the diagnosis of appendicitis doubtful can rarely be excluded by blood counts. A number of our cases with the preoperative diagnosis of appendicitis had internal hemorrhage from ruptured extrauterine pregnancy or ruptured hemorrhagic ovarian cyst. Since the absorption of blood raises the number of the white cells in much the same manner as does that of bacterial toxins the blood count is without value for making a differential diagnosis.

Furthermore nothing will be gained by making blood counts to differentiate acute appendicitis from pyogenic conditions with similar clinical symptoms, pyelitis, perinephritic abscess, inflammation of intestinal diverticula, perforated ulcer of the stomach or cholecystitis. Rost claims that pyosalpinx does not cause such a high blood count as does acute appendicitis. We cannot corroborate this statement since we found often in salpingitis 24,000 and more leucocytes.

Also Stahl's opinion that acute gonorrheal salpingitis is recognized by pronounced eosinophilia was not confirmed by our findings.

To obtain the greatest value from blood counts especially as a means of recording progress Federmann and Kilduff emphasize the importance of making repeated leucocyte counts. We are asked frequently to make series of blood counts prior to the operation, but I cannot understand what will be gained by this method for the patient. The prognostic value of repeated white cell counts is limited, first, by the fact that even in healthy individuals the number of leucocytes shows spontaneous fluctuations up to 3000 during one day, as demonstrated by the work of Jorgensen, Liebenstein, Glaser; second, a falling count of a case may be caused by two very different factors, either by the victory of the organism over the infection or by a functional exhaustion of the bone marrow. For these reasons Stahl recommends the differential count in appendi-

citis and other pyogenic conditions. According to him the shifting of the blood picture to the left, as Arneth designates a high percentage of transitionals, is an index of severe toxic absorption. Diminishing leucocytosis with progressive increase in transitionals proved also in our experience to be a bad prognostic sign. I remember only two patients who recovered in spite of 40 per cent transitionals in 10,000 and 12,000 leucocytes. But also repeated differential counts will never furnish an absolute correct diagnosis and prognosis and some of Stahl's own case reports demonstrate the danger of performing series of blood counts upon a patient who needs an operation and not a laboratory study.

In two of our cases which were diagnosed as acute appendicitis the stained blood smear was of definite value. Marked granular basophilia of erythrocytes led to the correct diagnosis of lead poisoning and saved the patients from unnecessary operations.

#### LITERATURE

Since Curschmann's paper on the significance of leucocytosis (1895) much work has been done on this important subject. But there is no unanimity of opinion which would fully justify the reliance placed today by the physician upon blood counts. Some writers consider this laboratory method as an invaluable guide to clinical diagnosis and indication for operation, other surgeons, not less experienced, attach no importance to the test, and a third group expresses the belief that the white cell count will furnish information of its limitations are considered.

In 1903 Federmann concluded from his study of 150 cases in Sonnenburg's clinic that in the first three days of acute appendicitis the value of leucocyte counts is very limited, but that later on, repeated white cell counts will give very reliable information on the progress of a case. He mentions that a high leucocytosis in the first days does not indicate necessarily a purulent process and that in peritoneal septicemia the leucocyte count is low. Two years later Sondern reported the relation of the general leucocytosis to the differential blood count. According to him an increase in the per-



centage of polymorphonuclears is an index of severe toxic absorption and the degree of total leucocytosis is an index of the resistance offered by the patient to this absorption. The greater the percentage of polymorphonuclear leucocytes in relation to the leucocytosis the greater the probability that pus has formed. Falkenstein (1924) was able to confirm Sonder's views. He found the blood picture to be a sure indication of the severity of the abdominal process and of the reaction of the body toward it in every instance except in children under 5 years of age.

In a review of the leucocytosis in acute appendicitis Menninger and Heim (1924) present the following conclusions: The total leucocyte count is a measure of body resistance against an inflammatory process up to a certain degree of leucocytosis. The percentage of polymorphonuclears is an index of the severity of the lesion. The relationship of these two counts is the most reliable aid in formulating indications for operation.

Four old masters of surgery to whom we owe much of our knowledge of appendicitis regard the blood count in appendicitis as worthless and harmful to the patient. Fowler states in his treatise on Appendicitis (1900) that he found approximately the same percentage of leucocyte increase in the acute cases without complications, as in those accompanied by diffuse peritonitis and that the practical surgeon therefore will rarely be able to avail himself of its use.

In Koerte's experience (1903) the instances where a low leucocyte count is found in spite of pus formation and on the other hand a high leucocytosis without peritonitis are not exceptional but rather common. Koerte never could obtain any information from blood counts in the first two days of the attack to help decide whether he should operate immediately or wait.

Sprengel sees in the leucocyte count only a method of the internist to keep the surgeon from early operation. According to him this method fails precisely in cases in which an aid to diagnosis is most needed.

In his discussion of Lowers paper on appendicitis (1923) A. J. Ochsner makes

the following remark: "A leucocyte count is invariably made and never looked at until after the operation has been completed. It is not well to cloud one's judgment by paying attention to it beforehand. We have followed this plan in several thousand of these cases of acute appendicitis and I am satisfied that by applying this method the patient has lost nothing and we should have gained very little in our knowledge about the condition had we followed the usual plan of making repeated counts before operating."

Less radical is the standpoint of the following clinicians. According to Kelly (1905) the leucocyte count may be of great assistance in diagnosis of certain obscure cases, but a low count must not mislead the surgeon and there are not any definite rules for the use of the leucocyte count in diagnosis.

Hertzler (The Peritoneum 1919) states that in a general way the increase in leucocytes runs parallel with the degree of infection and with the temperature, but he points out, that in some very virulent infections the leucocyte count may not only be normal but actually subnormal. In his opinion the leucocyte count is on the whole more apt to mislead than to aid in so far as the determination of the severity of the attack goes. It is of some value in differential diagnosis when typhoid fever or tuberculosis is suspected.

Deaver's conclusions (1914) may be summarized as follows: The variability of the white cell count makes it a very unreliable guide both in diagnosis and in prognosis. If it is considered as a subsidiary aid and its limitations are understood, it is of value and should be obtained as routinely as the history and physical examination.

In the latest treatise on Appendicitis (1925) Royster emphasizes in regard to the blood examinations that the differential count in its relation to the total white count is the most essential point and that a rapidly rising or falling count calls for the exercise of intelligent judgment. But he states also that no indications for operative interference can be predicated upon consideration of the leucocyte count alone.

CONCLUSIONS

Fowlers opinion that it is difficult to estimate the exact diagnostic value of the leucocytosis is at the present time as true as it was in 1900. From our own findings and from the study of the literature the following conclusions may be summarized:

1. The height of the leucocytosis bears no relationship to the severity of acute appendicitis. The white cell count does not run parallel to the different stages of the pathological process.
2. The practice not to advise operation unless there is a marked increase in the number of leucocytes is dangerous for the patient.
3. By repeated white cell counts very little will be gained in our knowledge about the patient's condition, because spontaneous changes in the number of leucocytes are physiological.
4. Appendectomy must never be undertaken or deferred on the basis of the blood count alone. Leucocytosis is a minor symptom of appendicitis, inconstant and unreliable.

TABLE I  
Leucocytosis in different stages of acute appendicitis

|                  | I. Stage    | II. State   | III. Stage | IV. Stage  |
|------------------|-------------|-------------|------------|------------|
| Leucocyte Count: | 13300-13750 | 13000-24650 | 9950-23000 | 8850-21200 |
| Average:         | 13350       | 19200       | 17600      | 16200      |

TABLE II  
Leucocytosis in cases without and with peritonitis

|                  | Empyema of appendix without peritonitis | Periappendiceal abscess | General peritonitis |
|------------------|-----------------------------------------|-------------------------|---------------------|
| Leucocyte Count: | 22850-24650                             | 8550-23000              | 9950-20150          |
| Average:         | 23750                                   | 18750                   | 16000               |

TABLE III  
Leucocytosis in our fatal cases of acute appendicitis with general peritonitis

|                 |             |
|-----------------|-------------|
| Leucocyte count | 14200-17200 |
| Average         | 15500       |

R

Posterior Root Section for the Relief of Pain

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Read at the Shawnee County Medical Society, Sept. 4, 1928.

In 1888 Dana first suggested the relief of intractable pain by section of the posterior roots, an operation termed rhizotomy. It consists in making a mid-line incision over the spinal processes

and removing the lamina overlying the roots to be sectioned, opening the dura and crushing, tying or cutting the posterior roots as they present on the dorsal aspect of the cord. A second type of operation called chordotomy consists in the performance of a laminectomy with exposure of the cord at the sixth thoracic segment and section of the anterior lateral pathways carrying the pain fibers from the trunk and lower extremities. This latter method is used in extensive, inoperable, malignant growths of the abdomen or vertebra. Posterior root section appears to be the method of preference in lesions involving the shoulder, upper extremities, or cervical areas, and in the majority of cases the patient is completely freed from pain.

The following case presents an instance of the relief of a cervical pressure neuritis with this type of operation, the results of which were only partially successful.

The patient, a woman, aged 69.

*Family History:* Father died at 48 of typhoid and had always been in good health. The mother died at 33 of pulmonary tuberculosis. The patient is the youngest of three children, one of whom died in infancy and the other at 72 years of age from "hardening of the arteries" with a subsequent paralytic stroke.

*Past History:* The patient had "scrofula" as a child and could not open her right eye until about 8 years of age. At this time she had several suppurative glands in the right side of the neck, but no trouble whatever after the age of 15. She has been free from pulmonary symptoms and gastro-intestinal symptoms. She has lost 12 pounds in the last 8 months. She had a moderately severe cystitis ten years ago, but no trouble since. She has never had any nervous system or endocrine disturbances, no operations or injuries. She has had 4 children, the oldest 44, the youngest 31, all in good health.

*Present Illness:* The patient was well and healthy until Thanksgiving, 1927. About this time she had a slight cold but cannot recall clearly whether just at this time or soon afterwards she began to have an ache in her left shoulder. She does not recall whether it was continuous



or not, but thought little of it at the time. It continued to get worse, spread to her neck and down her left arm to the thumb. It has progressively become worse, and for the last six months has been practically continuous, relieved only by an opiate. She has taken morphine for four months averaging about one-half to one grain a day. The pain was often so severe that she would have to walk the floor. From her description, the pain is limited to an area below her ear and above the clavicle and scapula. At times the sternomastoid muscle becomes rigid and the pain progresses down the outside of the arm to the thumb. For awhile the two middle fingers were affected and to a slight extent the index finger. The arm is sore to the touch, although impairment of motion has been slight. She has combed her hair until a month ago.

She has never had any indication of neuritis elsewhere and there is no history of alcoholism, exposure to lead, or other common causes of neuritis.

*Physical Examination:* There is a large, irregular scar on the right side of the neck and below the jaw with an asymmetry of the right side of her face. There is a moderate atrophy of the left arm, which is apparently weak from disuse. Blood pressure 190/100.

*Neurological Examination* shows no gross abnormalities except the weakness and atrophy of the left arm and a tenderness in the arm on pressure.

*Laboratory Examination* shows hemoglobin 85, red blood count 4,666,000, 6,700 leucocytes, 49 per cent polynuclears. Urine shows a trace of albumin and specific gravity of 1.017. *x-Ray* examination of the chest shows numerous calcified nodules around both lung roots as well as in the left apex. The bony thorax is normal. *x-Ray* of her cervical spine in May, 1928, shows an irregular decalcification and erosion of the transverse processes of the 3rd, 4th, 5th and 6th cervical vertebrae on the left side. *x-Ray* of the cervical spine in July, 1928, shows very little, if any, change. There is no destruction of any part of the vertebra and the intervertebral discs are not involved. The 5th, 6th, and 7th cervical vertebrae show a combination of

both rarefaction and increase in density. No suggested explanation is apparent.

#### COURSE

The patient was admitted to the hospital on June 27, 1928, and for one month was kept under observation with various attempts at relief of the pain. A series of diathermy treatments over a period of two weeks brought no relief, and the patient seemed to think that she felt worse afterward. Phototherapy was tried without any success. On July 27th, Dr. Merrill Mills and Dr. Milton Miller performed a posterior root section. An incision was made down the midline of the neck from the 4th cervical to the 2nd dorsal and after removing the lamina the posterior roots of C 4, 5, 6, 7 and 8 and D 1 were sectioned. A combination of nitrous oxide, oxygen and ether was used as an anesthetic and the operation was performed in an hour and twenty-three minutes. The affected lamina removed did not show any gross changes and in consistency seemed to be very much the same as on the unaffected side. The wound was dressed on the 5th, 7th, 9th and 11th days, post-operative, and primary union occurred.

Following the operation the patient continued to have a great deal of distress, although perhaps not as much as previous to the operation. It was possible to relieve her pain with drugs of the phenol-barbituric series, particularly the new combination of pyramidon and luminal. The maximum pain persisting seems to be in the neck above the level of the nerve section, but the patient continued to complain a good deal about pain in the arm.

The histological pathology of the lamina removed shows only an atypical bone tissue without any suggestion of malignancy. No particular help was gained from the examination except to show that it was not malignant.

#### DISCUSSION

The indication for posterior root section in this case is based on the fact that a cervical neuritis of an unknown origin had been entirely unsuccessfully relieved by all other means of therapy. Occasionally posterior root section cases present the post-operative picture as shown in this case, namely, one in which there is

only partial relief of the symptoms. The nerve roots sectioned include practically all of the sensory distribution of the upper extremity, and the subsequent pain of which the patient complains must be regarded as probably psychological in origin. This patient was not regarded as a neurotic individual, but although she had to some extent formed a morphine habit it seemed probably pre-operatively that the end results would be the entire relief of pain. It is possible that some of the pain of which she now complains is due to involvement of the 3rd cervical nerve, which was not sectioned and which supplies primarily the lower part of the neck. The general experience in such cases is a temporary increase in the pain over the affected areas for a period of perhaps a week or ten days post-operatively, until the degeneration of the pain fibers takes place.

#### DISCUSSION OF POSTERIOR ROOT SECTION

This operation, although originally suggested by Dana, is generally known as the Foerster operation, since he was the first to perform it. It has been used extensively, particularly for relief of malignant growths in the region of the neck and for breast tumors, and in the large majority of cases produces a complete relief of pain. The failure to relieve pain must be explained in most cases on an inadequate number of roots sectioned. Some conservative surgeons are inclined to cut no more than two, or at most three, adjacent roots because of the subsequent lack of muscle tone which usually results. Frequently there is a post-operative ataxia of the arm, or in cases where chordotomy is performed, of the leg, but this is usually of a temporary nature. In cases like the present, it is difficult to explain the persistence of pain over the areas in which the roots have been cut. Anatomically, there is no explanation, since a complete anesthesia results from the section and the so-called "memory" pains are regarded as of a psychological origin. The operation unquestionably affords a very effective means in many cases of relief from intense, and often almost unbearable, pain, in malignant disease and in occasional unusual cases of neuritis, as in this operation. This type of operation has been used more re-

cently for the relief of deep pain in the ear by section in the vagus, and many years ago was first used by Spiller in the section of the posterior root of the trigeminus for the relief of trigeminal neuralgia. Posterior root section is not ordinarily practiced for relief of pain in the lower spine, sacrum, abdomen, rectum, etc., but such cases are effectively relieved by the operation called chordotomy mentioned above and used extensively by Frazier, Peet, Wartenburg, and at the recent American Medical Association meeting was discussed by Fay and Grant.

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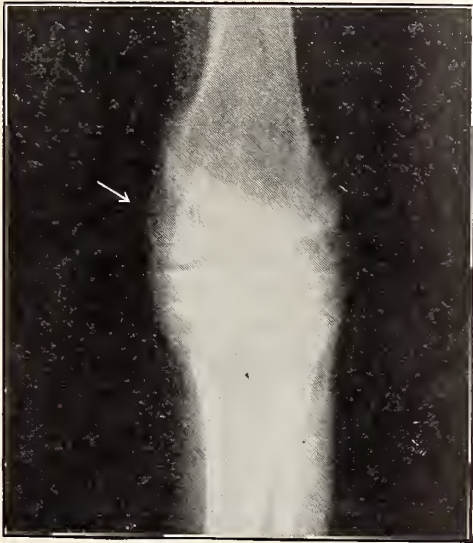
#### TUBERCULOSIS ABSTRACTS

When tuberculosis attacks the bones and joints of the child, its devastating effects are unusually cruel. Insidiously and surely, this enemy shows up the child's joyous activity, mars the grace and beauty of its movements, and finally cripples the lithe young body beyond repair. Who can resist the pathos of a Tiny Tim! But a better day dawns. The incidence of bone and joint tuberculosis is undoubtedly lessening. How much credit for this is due to the better production and pasteurization of milk is not altogether apparent, but surely it is considerable. However, in this country, by far the larger proportion of cases have been caused by the human type of tubercle bacillus. Moreover, methods of treatment are more effective. Surgery, valuable but no longer the sole reliance, is now being supplemented by general treatment in open air institutions, by heliotherapy and other means. Rollier has given us an entirely new conception of methods of treatment and Humphries



states: "In cases of surgical tuberculosis, it is difficult to restrain one's enthusiasm when speaking of heliotherapy or to refrain from quoting cases which would read as do the miracles." Tuberculosis of the joints and bones is still common and serious enough to warrant the most careful attention of every practitioner. Best results in treatment are attained through the co-operation of the physician and the surgeon. The various forms of light therapy are not to be applied hit or miss. They can work harm, and should always be administered under skilled and experienced direction.

### Tuberculosis of Knee Joint



Courtesy Maxwell Harbin, M.D.,  
Lakeside Hospital, Cleveland, Ohio

### Bone Tuberculosis a Children's Disease

Tuberculosis of the joints is principally a disease of children. More than 85 per cent of all cases, says Ritter, occur in children from two to ten years, and more than 50 per cent at from two to five years. The disease involves the spine in about 40 per cent of all cases, the hip in 30 per cent and the knee in 20 per cent. Tuberculous dactylitis, or disease of a finger joint, is not infrequent and should not be overlooked.—Handbook of Tuberculosis for Medical Students and Practitioners of Medicine, John Ritter, M.D.

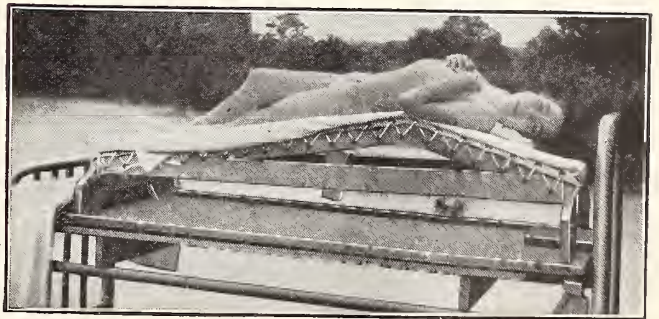
### Pathology of Joint Tuberculosis

Bone and joint tuberculosis is secondary to tuberculosis of some other part of the body. The bone is attacked first and then the joints. The process usually starts on the joint side of the epiphyseal line. The factors responsible for this are: end arteries, poor circulation and traumatic injury.

The diseased area or focus may be encapsulated and eventually heal, or lie dormant, perhaps breaking out anew at some future time as the result of trauma. Caseation often results, and then the disease may spread to the joint through the cartilage, or to the synovial membrane. Destruction of the joint structures follows. So-called cold abscesses and fistulous tracts are formed if the disease breaks through the bones and joints. Secondary infection, especially with the staphylococcus, sometimes occurs by way of the fistulous opening and may hasten the destructive process.

There is very little attempt at new bone formation. Healing takes place by calcification, encapsulation and cicatrization. Deformities, atrophy and contractures commonly occur.—Surgical Treatment of Tuberculosis of Bones and Joints, E. J. Cummings, M.D., Texas State Jour. of Med., Nov., 1927

### Modified Bradford Frame



Courtesy Clarence L. Hyde, M.D., Springfield  
Lake Sanatorium, East Akron, Ohio.

### Detecting Joint Tuberculosis

Berkheiser stresses the important etiological causes of tuberculosis of the bones and joints as follows: Contact with active tuberculosis, especially in the home. The younger the child, the greater the liability to bone involvement. Trauma is certainly an important factor. Most of

the cases occur in the joints which have the widest range of motion, while the joints which are less mobile and hence less frequently traumatized seldom become involved

Among the prodromal signs, it is noticed that the child is inactive and not inclined to play strenuous games with the other children as heretofore. The child often develops anemia, the appetite is not good; he gradually loses weight, and this results in a drawn appearance.

The important subjective symptoms are: (a) stiffness of the joint and (b) pain on movement of the joint locally, though the greater pain is often referred along the course of the nerve to some distant point. Gradual slight change in gait, due to unconscious protection of the joint, and night cries on account of muscular relaxation are important symptoms.

The objective findings are those of a chronic synovitis, as: (a) swelling which is uniform, obliterating the bony landmarks of the joint; (b) atrophy of the adjacent muscles, due to disuse and proportional to the duration of the disease; (c) deformity in varying degrees because of the bone destruction and resulting angulation of the articular surfaces.\*

The differential diagnosis is of as much importance as the essential diagnosis. All the conditions which cause pain or deformity of the hip must be ruled out, as follows::

1. Acute epiphyseitis, acute osteomyelitis, especially of the femur, and acute septic arthritis. These concurrent diseases usually occur in young individuals who have had some of the acute exanthemata; acute tonsillitis, furunculosis or sepsis in some of the other bones or joints.

2. Perthes' disease, or osteo-chondritis deformans juvenalis, the symptoms of which are very similar to tuberculosis except that in this condition there is less stiffness, less atrophy and less tendency to deformity. The *x*-ray reveals that the head of the femur is flattened and later segmented, while the neck of the femur becomes broader.

3. Idiopathic coxa vara occurs usually in fat boys, who at puberty have a disturbance of the glands of internal secretion and do not develop the secondary sexual characteristics

4. Congenital dislocation of the hip, in which there is a history of a painless limp which has been present since the child started to walk.

5. Sciatica, with its pain referred down the nerve, especially when the nerve is stretched by extending the flexed knee on the thigh which is held flexed.

6. Sacro-iliac disease, in which there is a tilting of the body away from the affected side and a limp due to the restricted motion at the hip.

7. Pott's disease of the lumbar region, with the psoas abscess which causes a flexion of the thigh and restriction of extension, while all other movements of the hip are free. With Pott's disease, there is stiffness of the back, an angular kyphosis, and *x*-rays reveal destruction of the bodies of the vertebrae.—Diagnosis of Tuberculosis of the Bones and Joints, E. J. Berkheiser, M.D., Bul. of the City of Chicago Muni. Tuber. San., June, 1925.

#### —R—

#### Fissures of Nose

Richard L. Sutton, Kansas City, Mo. (J.A.M.A., Aug. 25, 1928), describes lesions which occur at the anterior angle of the opening of the nose, and, while scarcely perceptible to the eye of the examiner, are very persistent, and give rise to considerable pain and discomfort. Not infrequently there is a secondary, streptococcic involvement, which may cause slight fever and some intermittent redness of the tip of the organ. Dryness of the nasal mucosa and rosacea probably are provocative factors, but why the condition is almost wholly limited, at least in my experience, to middle-aged women, he does not know. The most effective agent is a needle-pointed electric cautery. With this modern "micro-brenner" the raw surface, previously put on the stretch by means of a nasal speculum, is carefully "ironed" out. Afterward, a dressing of ointment of yellow mercuric oxide (2 per cent) is applied. As a rule, relief is prompt and permanent.

\*The author is describing the later manifestations. Early symptoms are not pronounced; in fact the local changes may be so slight as to be overlooked.



# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - Editor**

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### PROGRESS IN THE CAMPAIGN FOR THE BASIC SCIENCE ACT.

By this time every member of the Society will have received a copy of the proposed Basic Science Act. It will be advisable to read it over carefully and then read it again. Some have found objectionable features in the bill which do not exist and a second reading would have convinced them of that fact.

The Basic Science Act was prepared by the Bureau of Legal Medicine and Legislation of the A.M.A., after long and systematic study of the requirements in various states. Some slight changes were made in order to comply with certain established methods of procedure in this state. The only change of any importance, however, is in the composition of the board of examiners. The original bill provides "The members of the board shall be selected because of their knowledge of the basic sciences aforesaid. No member of the board shall be actively engaged in the practice of the healing art or any branch thereof." Obviously, it would be difficult to find five men in

this State so qualified. There are perhaps a few men in the state, not engaged in the healing art, whose knowledge of the basic sciences is adequate, but it would be difficult to locate five such men who would be available and satisfactory. The composition of the board as provided in our bill seemed to be the most logical solution of the problem. It will contain the most prominent educators in the state, men who, though not necessarily noted for their knowledge of the basic sciences, know how such examinations should be conducted and who have in the schools of which they are the heads numerous instructors, not engaged in the practice of the healing art, who are better qualified to prepare the necessary questions and pass upon the answers than any retired practitioners would be.

In order that there may be no question as to the authority of the board to employ such assistants it is proposed to amend section 4 of the bill to provide therefor.

It has been claimed that this law will disturb our reciprocity relations with other states. Section 8 of the bill provides for reciprocity and there seems no reason why our present reciprocity relations should be affected in any manner. No reasonable interpretation of this section would justify the objection raised, however, suggestions for any change in that section, or any other section, will be welcome and will be given careful consideration before the bill is presented.

Each member of the Society will by this time have received, in addition to a copy of the proposed bill, three blank petitions each ruled for the names and addresses of thirty-five voters. Each member has been asked to secure at least one hundred signatures and as many more as possible. Additional blanks will

be mailed on request.

It is reasonable to believe that the people who patronize a member of this Society are friends of scientific medicine and will willingly sign this petition. One hundred signatures can easily be secured by any member of the Society who is willing to make a very little effort.

One member has written for six additional blanks, having already filled three; another member has written for more blanks stating that every one in his community wants to sign the petition.

Each set of blanks is numbered to correspond with the number of the member on our mailing list. In this way it will be possible to give each one credit for the number of signers he has secured, and also to determine to what extent each member is interested in the passage of this bill.

It may be well to consider that if every member secures one hundred signers we will have a petition to the legislature signed by 150,000 voters in the State. The request for a certain kind of legislation by one hundred and fifty thousand voters will be a pretty strong argument for our bill, an argument which cannot easily be ignored.

From reports received the people were never so favorable to any proposed medical legislation as they are to the Basic Science Act. They very generally recognize this proposed law as fair to all concerned and seem to appreciate the fact that it is designed to protect them against incompetent and ignorant practitioners. All they need is a chance to express themselves and it is up to the family physicians to give them that chance. If the doctors do not ask their clients to sign these petitions they will wonder why.

45,000 pamphlets and circulars explaining the nature and purposes of this bill have been mailed throughout the

State and a considerable amount of interest has been created. The outlook for the passage of this bill by the next legislature is unusually promising, but it will require the unanimous support of the medical profession.

#### THE AUXILIARY

Now that the activities of the county societies are being resumed it is time to give a little consideration to the Auxiliary. The wife of a doctor, if she is willing to be and is permitted to be, is a business asset not only to her husband but to the medical profession. In a majority of instances the social standing of the doctor's wife gives her sufficient prestige to enable her to advance the cause of scientific medicine among those who are most likely to dictate the sort of attention the illnesses of the family shall have. She occupies a strategic position between the medical profession and the public and can easily locate adverse influences and opposing forces.

The conjoined efforts of the wives of the members of the medical profession can accomplish a great deal for us in our campaigns for better sanitation, for universal protection against contagious diseases and, what is of most interest to us at this time, in our campaign for better legislation.

Several units of the State Auxiliary have already been organized and are in excellent working condition, and are not only willing but anxious to help us in this campaign. One of these units should be organized in every county where there is a medical society. This can be easily accomplished if the members of the societies will take enough interest to urge their wives to join.

These auxiliary units can be of inestimable value to us in this campaign, they can enlist large groups of women in an aggressive appeal to the legislature



for the adoption of the Basic Science act. We need their help now more than we ever have before, and as much as we will ever need it. Let us exert a little effort—individual and combined—in promoting the interests of the Auxiliary, at the same time doing a little promoting for our own cause.

Mrs. O. D. Walker of Salina has been appointed by the Auxiliary to act as a sort of intermediary between the two organizations. She will be very glad to supply whatever information is required and give whatever assistance may be necessary in developing new county units.

#### THE COST OF MEDICAL CARE

The committee which will attempt to solve the problem of the high cost of medical care is making headway with its program. Ten states have been selected from which information will be secured and one of these is Kansas.

From an interview with the representative of this committee it is learned that a hundred families in each of a number of the larger cities and several rural communities will be selected. The amount of sickness in each of these families and all of the expenditures occasioned by such sickness will be recorded for one year, health officers will be appointed to visit these families and secure the data. The hundred families will be selected from different economic groups, those protected by various forms of industrial sickness insurance being omitted.

The expense accounts for sickness will be carefully tabulated so that the cost for hospital care, nursing, medical and surgical supplies, and medical or surgical care can be readily determined. It was also stated that claimed items of expense will be verified where possible. If it is claimed that the doctor was paid a certain amount the name of the doctor will

be secured and he will be asked to state the amount received. The doctors who happen to be the medical attendants in these cases will also be requested to verify the diagnosis given by the patient or patient's family.

Just what relation the correctness of diagnosis has to the objective of this investigation was not explained. Perhaps it will be of sufficient interest to the health authorities to justify that department in taking over the details of the investigation in each state.

The plan outlined appears to be a very practical one and should give sufficient data from which to work out the average cost of medical care per family, without regard to the size of the family. That in itself will be interesting but of no particular value except to the economist and for a basis upon which to fix a proper premium rate for sickness insurance. However, if the sickness records are kept with sufficient detail it will be possible to determine the average cost of sickness to those who are sick; and by careful tabulation it will be possible to determine the average hospital cost to those who are hospitalized, the average cost of nurses to those who employ them, the average cost of drugs and supplies, the average cost for various kinds of laboratory tests to those who require them and finally the average cost for surgical or medical services. Presumably the committee will have all of these data tabulated and the results worked out. Having determined all of the details it is to be hoped that the committee will find some solution of the problem of the high cost of medical care which will not involve the independence of the medical profession.

It has been estimated that the average practitioner collects for two-thirds of the professional services rendered. In other words one-third of the average practi-

tioner's services is non-remunerative either because of the inability or the unwillingness of his clients to pay. In one hundred families picked at random from the different economic groups there will be a certain number who are unable to pay and another certain number unwilling to pay. So that if the average cost of sickness is based upon the amounts paid out by these various families on account of sickness the estimated average cost, at least as far as the services of the medical profession is concerned, will be considerably too low. If this average cost is taken as a basis for the equal distribution of the cost of sickness among those who are sick and those who are well, the doctors will still have to carry one-third of the burden of caring for the sick. Some years ago, in the arguments for the fairness of a sickness insurance plan, it was stated that as far as the physician was concerned he was just as well compensated if he made nine calls for two dollars each as he would be if he made six calls for three dollars each and three calls for nothing. Of course, that is obvious, but in the readjustment of the cost of sickness on an attempted equalization plan should the medical profession be expected to carry one-third of the burden simply for the reason that it always has done so?

Let us suppose that in the analysis of the one-hundred families it is found that the average cost for professional services in fifty of those families is twenty-four dollars a year, in twenty-five families there is no sickness, and there are twenty-five families with an average sickness equal to the first group but who cannot or will not pay. The average cost in the one hundred families is twelve dollars a year, the average value of the services is eighteen dollars a year. If the cost be equally distributed among the one hundred families they will each

pay twelve dollars a year. But twenty-five of these families either cannot or will not pay, even on the equalization plan, so that attending physician will receive nine hundred dollars for the services for which he now receives twelve hundred. Suppose the rate is based on the value of the services rendered, eighteen dollars a year. There are still twenty-five families who cannot or will not pay, so that the physician receives thirteen hundred-fifty instead of eighteen hundred dollars for his services to this group of one hundred families. That is he is still carrying one-fourth of the burden.

Of course all the suppositions, surmises and suspicions are premature. No one can tell now what the data being secured by this committee will show nor to what conclusions and suggestions they will lead, but the problem to be solved is of such vital interest to the medical profession that it is worth while to give it some thought even in advance of the actual findings.

#### NEED FOR MEDICAL OFFICER IN CABINET

During the early history of the Kansas Medical Society it was a custom of the late Dr. W. L. Schenck to present resolutions at each annual meeting to the effect that the National Congress should be "memorialized" upon the economic necessity and importance of creating a place in the President's Cabinet for a secretary of public health, or something of that nature. These resolutions were always unanimously adopted, as similar resolutions were adopted by other state societies. Since that time there have been many sporadic and a few concerted efforts on the part of medical organizations to impress the powers that be with the economic importance of the health department and convince them that the magnitude of the services rendered by this department entitles it to particular



representation in the cabinet.

Recently the American Medical Editors Association adopted the following resolutions:

Be It Resolved: It is the sentiment of the American Medical Editors' Association that there should be a Medical Officer in the President's Cabinet at Washington. That such an office be created and that the interests of the medical profession should be aroused, and that editorials be written to appear in the medical journals of this country, for the purpose of eventually accomplishing this result.

Every member of the medical profession realizes how important the matter of health is in the economic affairs of this and every other country. They are mostly familiar with the unsuccessful efforts that have been made to impress the powers that control these matters with the need for a secretary of public health in the Cabinet. We presume that is also the purport of these resolutions and, if so, there is no doubt that the profession is already in sympathy with the proposition.

However, discussing among ourselves the importance and the need for a Cabinet office devoted to the interests of public health, either in our society halls or in the medical press, will get us nowhere.

The potential political influence of the medical profession is something to be reckoned with; the actual or manifest political influence of the medical is something that can be ignored with impunity. As long as this situation exists, spoken or printed arguments, resolutions and petitions are wasted efforts, for matters of this sort have a political aspect and require political influence to carry them to a successful issue.

How sufficient political influence can be secured is the problem. Granted that the idea of a bureau of public health is already popular with the members of the medical profession, there remains the

masses of the people who think nothing about it and care nothing about it. It would seem, therefore, that our first objective should be to sell the idea to the people at large. This can best be accomplished through the newspapers and by magazine articles, public lectures and personal interviews. The only influence to be expected from the medical press is perhaps in stimulating members of the medical profession to make some concerted effort along this line.

#### BRINKLEY STILL ON THE AIR

At the last annual meeting of the Society the following resolution was introduced by Dr. O'Donnell and was unanimously adopted:

Whereas, there is located, within the State of Kansas, Broadcasting Station K. F. K. B. located at Milford, Kansas, operated by Dr. J. R. Brinkley, who, posing as a surgeon and specialist, gives daily lectures on medical topics—the sole purpose of which is to lure patients to his hospital for his financial benefit. There is nothing in his lectures of educational value to the public but many misleading statements made obviously to frighten prospective patients to consult him for relief of their imaginary or real infirmities.

Whereas, the said Dr. Brinkley is unethical and has no professional standing and is not affiliated with any ethical medical society in the state.

Therefore, be it Resolved, by the Kansas State Medical Society, now in session, that the National Board of Radio be respectfully asked to revoke the license of this station and thus in a measure clear the already overcrowded atmosphere, at the same time conferring a favor on many intelligent listeners and misguided prospective patients.

A letter just received from a member of the Society informs us that Brinkley has recently been granted a great increase in radio power and a more favorable wave length, by the Federal Radio Commission.

It is hard to understand why any de-

partment of the Government should grant special favors to a man so notorious as Brinkley. There is no need to review the history of this man which every member of the Society is already familiar with. However, if by any chance there is one who has not heard of his exploits we would refer him to the Journal of the American Medical Association, January 14, 1928, pp 134-137.

A protest from each individual member of the Society might have some influence. It is therefore suggested that each one send such a protest to The Federal Radio Commission, Washington, D. C.

### CHIPS

Dandy, in the June number of Archives of Surgery, reports nine cases of Meniere's disease treated by intracranial section of the affected eighth nerve, none of whom has had a subsequent attack. He says the operation should be attended by no mortality and no after effects, since the patients are practically deaf in the affected ear before operation. He thinks there are reasons to doubt that the cause of Meniere's disease is primary in the semicircular canals. He suggests a primary lesion of the acoustic nerve as a more probably primary source of the attacks.

Toomey recommends the intravenous injection of from 50 to 75 cc. of a 20 per cent solution of glucose in severe cases of diphtheria. It increases both the systolic and diastolic blood pressures, the former is increased as much as twenty points and the latter forty points. There is a modification of the general cyanosis of the patient and he appears and feels better. There are fewer cases of heart block and acute cardiac dilatation where this treatment is used.

The remarkably beneficial effects of the intravenous injection of hypertonic salt solutions in cholera and other diseases is not entirely due to increase in blood volume so produced, according to the findings of Fleming, British Journal

of Experimental Pathology. The bactericidal power of leucocytes is influenced by the salt content of the blood. In man the injection of an amount of salt sufficient to raise the salt content of the blood by 0.01 per cent causes after three hours a great rise in the bactericidal power of the blood. Large quantities result in a temporary decrease with a subsequent rise in bactericidal power.

Fullerton reports that diphtheria carriers admitted to the Cleveland City Hospital had been treated by numerous methods and a considerable variety of applications had been used. His conclusions were that any local application or irrigation, even merely plain water, tended to render the carrier free from the bacillus a little sooner than when untreated. Most of the cases cleared up in from fourteen to thirty-one days. Those in whom the tonsils and adenoids were removed cleared up more quickly than those treated by other methods.

The editor of the Japan Medical World calls attention to the fact that the increase in the population of Japan last year was 93,000 less than that of the preceding year. This, he says, was largely due to a decrease in births, and this is the first instance in the history of Japan where the total births have been smaller than those of the previous year. He attributes the decreased birth rate to birth control practiced by people who have begun to realize the financial difficulties incident to the raising of large families. Commerce and industry of Japan with the support of five and one-half million households of farmers have been able to support a population that doubled in the past sixty years. He questions if the productive capacity of these industries will be able to support the population thirty years hence unless birth control is more largely practiced.

Roentgen ray therapy for the treatment of exophthalmic goiter is not free from danger. Kilduffe in the Archives of Otolaryngology, August, 1928, reports a case of gangrene of the larynx five years after the last irradiation for goiter. He refers also to cases reported by



Iglauer and Clerf, twenty-seven in all, in which severe laryngeal injury followed roentgen ray treatment. In one of the cases reported by Clerf laryngeal symptoms appeared five years after the treatment for exophthalmic goiter and at autopsy the larynx was found to be a putrid gangrenous mass. In another case necrosis of the laryngeal cartilages occurred nine years after the treatment. It is the opinion of Aschoff that trophic changes following prolonged or intensive radiation are due to changes in the endothelium leading to obliteration of blood vessels.

Blalock reported the results of some experimental studies on shock in the *Archives of Surgery*, November, 1927. These experiments conducted on dogs showed that the essential circulatory effects of a diminished blood volume are decreased minute cardiac output, diminished calibre of peripheral arteries. The blood pressure is an inadequate guide to the state of the circulation in incipient shock. In the treatment drugs are relatively useless. Transfusion of blood and intravenous injections of saline solutions are beneficial if not too long delayed. Digitalis is harmful, strychnine useless, epinephrine and ether uncertain in their action, caffeine slightly beneficial in mild shock, ephedrin more beneficial than other drugs, but not so efficient as the administration of fluid or blood.

A report appeared in one of the Paris journals of a case of Hodgkin's disease that had been treated by the injection of a serum taken from another patient with the disease that had been treated by roentgenotherapy. There was spectacular improvement and after subsequent roentgenotherapy the patient was apparently cured.

Some years ago a case of Hodgkin's disease was reported by McVey and Wilson in this journal, that had been treated with typhoid vaccine. After a series of medium doses the enlargements disappeared and the patient was well for several months. The enlargements reappeared in greater magnitude. A maxi-

mum dose of typhoid vaccine was given and within a week the masses had again disappeared. The patient died suddenly and unexpectedly so that the permanency of the effect of the treatment could not be determined.

Copher and Dick have published a report of some studies on the portal circulation in *Archives of Surgery*, September. Studies were made on dogs with the use of dyes. They found that there were three separate and distinct currents in the portal vein and that the blood in these separate streams did not mix either in the portal vein or in the liver. These currents are derived from three sources, the splenic vein, the large mesenteric vein and its branches, and the small mesenteric vein. Blood from the organs not strictly engaged with digestion or absorption of food, the spleen, the stomach and a greater part of the colon, goes to the left lobe of the liver. Blood from those parts of the alimentary tract where the products of digestion are absorbed, the duodenum, the head of the pancreas and the upper part of the jejunum, goes to the right lobe of the liver.

Mosenthal, in a paper on the treatment of essential hypertension, *Journal American Medical Association*, September 8, says the idea that proteins are harmful, over short periods of indulgence at least, has been done away with. In regard to the influence of prolonged unrestricted protein feeding, there is no reason given why it should influence blood pressure. A very low protein diet induces anemia and physical weakness. All forms of protein, whether from fish, red meat or white, eggs or any other source, are permissible in usual amounts; if the hemoglobin and red cell count rise above the normal the proteins should be curtailed and only then. Fluids taken in amounts up to 6 liters a day do not influence blood pressure. Salt restriction does not lower blood pressure though it has a favorable effect on cardiac complications.

Granger warns against the promiscuous use of ultra-violet radiation, in

the American Journal of Physical Therapy, September. He says the solar ultra-violet rays are those to which the human organism has been tuned to respond. In the most popular form of ultra-violet radiation, the mercury vapor arc, the ultra-violet radiation consists of these longer wave lengths plus others much shorter than those to which the body is accustomed. In some cases a markedly decreased resistance of the hemopoietic organs ensues. In other cases ultra-violet radiation has acted like a protein shock bringing about a prolonged negative phase. After the ingestion of certain articles of food or hypnotics of the barbitol group, sickness may ensue. He says he has been unable to find an authenticated case of skin cancer resulting from ultra-violet therapy, but in certain skins markedly susceptible to the sun's rays an intractable eczema may be produced.

## — R — COMMUNICATIONS

### A Reply

The Journal of the Kansas Medical Society,  
Topeka, Kansas.

I wish to reply to the letter, in the Journal of June, 1928, by Dr. E. D. Ebright of Wichita, Kansas in which he criticizes so thoroughly the policy of the Medical School.

As a member of the Crawford County Medical Society, I wish to state that I was present at the meeting of our society at which we enthusiastically requested the Orthopedic Clinic be established at Pittsburg for this southeast corner of the state. The Clinic was not established in spite of us but through our urgent invitation.

We are all most happy because of its being established and I know the profession down here is very much pleased with the way it is handled. Our community here is also well pleased with the work of the Clinic and recognizes the value of the services of the doctors and does not abuse it.

Every patient that is seen at the Clinic has a physician who knows the patient is being seen by the specialist and who is advised by the specialist how to follow up the treatment. No patient is seen who does not have a doctor in charge. No patient is seen without the doctor's knowledge so that in no way does our orthopedic clinic interfere with the work of the private physician or surgeon or orthopedist. In other words our society controls local details of management such as selection of those who are legitimate subjects for the clinic, etc.

We feel that the clinic makes the Medical School more real to us and I know our men are much more interested in the Medical School now than they were before the clinics were started.

It is hoped that the doctors in the counties near Crawford County will help support the clinic. I might say, too, that if the Medical School does not

continue the clinics and keep them under the supervision of the local medical societies, there are lay societies that are all too anxious to take up the work. This would be disastrous, it seems to me, because then every case would perhaps be received without a local medical advisor and the clinic would in a way be a competitor to the surgeon or orthopedist. As it is the clinic is in no way a competitor but merely a consultant and I believe occupies a place in the community that can hardly be filled in any other way.

The physician is invited to bring his patient to the clinic and help with the treatment and diagnosis and in this way the clinic serves as a post-graduate course in orthopedics for those that are interested.

We would be greatly disappointed in this section of the state if the Medical School should find it necessary to take this most helpful service from us.

I understand from Dr. Wahl's letter to the various County societies in which the clinics are established that owing to the resolutions of the House of Delegates condemning them, the clinics will be discontinued after October 1, unless unquestioned support is assured by the local society.

This question will be taken up at the first meeting of our society in September and I feel assured, although I am just a member and not an officer of our society, that the Crawford County physicians will be behind the clinic unanimously.

I have been in close touch with the Medical Society since my graduation in 1916 and I can say that I am indeed glad to say I am a Kansas man. The work that our faculty is doing is second to none in the country. They are doing it on a small scale because of limited funds but the real work is being accomplished and we should not make their problem harder by opposing their policies. One can hardly accuse Dr. Wahl of being a politician and yet in the article by Dr. Ebright he speaks of the service that the Medical School is giving the state as a bit of politics and he also speaks of this service as a bribe that the school is giving the people.

I am perhaps more interested because I happen to be president of the Kansas University Medical Alumni Association this year, but if we are to see the good work of our school go on we must not keep throwing stones at it.

Our faculty is human and the resolution of the State Medical Society in which they condemned the Medical School for the organization of orthopedic clinics must put more or less of a damper on their efficient services to our Medical School.

Let us all make constructive criticism if we would help the State and the Medical School.

Respectfully,

HOWARD E. MARCHBANKS, M.D.

### A Warning

September 11, 1928.

Editor Kansas Medical Journal,  
Topeka, Kansas.

Dear Sir:

A man who, as indicated by the enclosed letter (copy) from the Sorenson Co., is practicing fraud upon the physicians of the Middle West, has been moving westward through Iowa and will probably be working in your state unless he can be run down.



It occurred to us here that a story in the Journals of the states where he might be expected should end in his apprehension by the Sorenson Company, and would save the members of the profession trouble and financial loss.

The method of this man has been to offer a service, apparently on a net cost basis and then make excessive charges.

We are passing this on for whatever you may consider it worth.

Sincerely yours,

VERNON D. BLANK,

Managing Director, Journal of the Iowa State Medical Society.

Dear Dr. ———

Replying to yours of the 24th. We do not have any service man in our employ by the name of F. H. Leigh, nor do we issue any series of service coupons such as you speak about in the last paragraph of your letter. We are enclosing with this one of our latest price lists on the back page of which are "fundamentals of Sorenson service" in which is incorporated our guarantee on any goods of our manufacture.

We have received a number of complaints regarding this party, F. H. Leigh, and would like very much to get our hands on him, as he is nothing but a fraud. He seems to be working his way West as the complaints have come from doctors recently in Davenport, Iowa, then Cedar Rapids, then Des Moines, and this afternoon we received a letter about this man from a doctor in Omaha, Nebraska.

We would respectfully suggest that you inform your colleagues, and any information you can give us would be gratefully appreciated.

Yours very truly,

C. M. SORENSON CO., Inc.

## SOCIETIES

### MEDICAL ASSOCIATION OF THE MISSOURI VALLEY

The Medical Association of the Missouri Valley will meet in Omaha October 30th and 31st and November 1st. An effort is being made to reorganize this worthy society to meet the demands of changing conditions. The County Societies, Hospital Staff meetings and to a certain extent the State Societies provide opportunities for the presentation and discussion of case reports and didactic papers. Many have expressed the belief that there is a place for a society whose activities are primarily educational and whose programs shall consist largely of original work of moment presented by the investigators in person, and of clinics given by master teachers in medicine. A glance at the program offered for the Omaha Meeting will show that it fulfills

the above requirements. If the profession wants such a society it will be necessary for physicians to make it known by their presence.

Membership dues are two dollars per annum. An initiation fee of one dollar is charged. Non-members pay an admission fee of three dollars.

### PROGRAM

All Scientific Sessions will be held in the Medical Arts Auditorium, 17th & Dodge Street.

**Tuesday, October 30, 1928**

### MORNING SESSION

- 9:30 The Discussion of the Clinical Manifestation of the Lymphomata with Report of 136 Cases—Dr. C. W. Baldrige, Assistant Professor in Medicine, University of Iowa, Iowa City, Iowa.
- 10:00 (Subject to be announced)—Dr. Vernon C. David, Associate Clinical Professor of Surgery, Rush Medical College, Chicago.
- 10:30 Some Consideration of Interest in Liver Disease—Dr. Leonard G. Rowntree, The Mayo Clinic, Rochester, Minnesota.
- 11:15 The Etiology of Gastric and Duodenal Ulcer—Dr. A. C. Ivy, Professor of Physiology, Northwestern University, Chicago.

### AFTERNOON SESSION

- 2:00 Surgical Clinic—Dr. Vernon David.
- 3:00 The Discussion of Certain Recent Developments in the Metabolism of Children—Dr. P. C. Jeans, Professor and Head of the Department of Pediatrics, University of Iowa, Iowa City, Iowa.
- 3:30 Further Posture Studies in Gynecology—Dr. Norman F. Miller, Associate Professor of Obstetrics and Gynecology, University of Iowa, Iowa City, Iowa.
- 4:00 Injuries of Upper Cervical Vertebrae—Dr. Charles Ryan, Des Moines, Iowa.
- 4:30 A Study of the Principles Involved in Medical Diagnosis—Dr. Julius Weingart, Des Moines, Iowa.

### EVENING SESSION

- 8:15 The Physiology of the Gallbladder—Dr. A. C. Ivy.

- 9:15 Functions of the Liver—Dr. Frank C. Mann, The Mayo Foundation, Rochester, Minn.

**Wednesday, October 31, 1928**

MORNING SESSION

- 9:00 Intestinal Obstruction due to Pin Worms with Case Report—Dr. A. C. Stokes, Omaha, Nebraska.
- 9:30 Endocrinology in Relation to Skin Diseases—Dr. Alfred Schalek, Professor of Dermatology and Syphilology, University of Nebraska, Omaha, Neb.
- 10:00 The Treatment of Heart Disease—Dr. James B. Herrick, Professor of Medicine, Rush Medical College, Chicago, Illinois.
- 10:30 Digitalis—Dr. P. T. Bohan, Professor of Medicine, University of Kansas, Kansas City, Missouri.
- 11:00 Low Back Injuries (More definite title later)—Dr. Frank D. Dickson, Kansas City, Missouri.
- 11:30 Static Backache—Dr. Robert Schrock, Assistant Professor of Orthopedic Surgery, University of Nebraska, Omaha.

AFTERNOON SESSION

- 2:00 Medical Clinic—Dr. James B. Herrick.
- 3:00 Spirochaetal Lung Infection—Dr. Russel L. Haden, Professor of Experimental Medicine, University of Kansas, Kansas City, Kansas.
- 3:30 Dr. M. L. Harris, President-Elect of the American Medical Association, Chicago.
- 4:00 Newer Knowledge of the Physiology of the Semicircular Canals with Clinical Implications—Dr. James F. McDonald, Professor of Physiology, Creighton College of Medicine, Omaha, Nebraska.
- 4:30 Round Cell Infiltrations in Poliomyelitis and Encephalitis—Father N. Michels, Associate Professor of Anatomy, Creighton College of Medicine, Omaha, Neb.
- 6:30 Dinner—Hotel Fontenelle Ballroom. Toastmaster—Dr. Donald Macrae, Council Bluffs, Iowa. Presidential Address—The Obligations of the State University Medical Schools—Dr. Fred M. Smith, Professor and Head of the

Department of Medicine, University of Iowa, Iowa City, Iowa. Dr. M. L. Harris, Dr. James B. Herrick and Dr. Ralph Major will also address the society.

**Thursday, November 1, 1928**

MORNING SESSION

- 9:00 Anemia in Infants and Children—Dr. Clifford G. Grulee, Clinical Professor of Pediatrics, Rush Medical College, Chicago.
- 9:30 Studies on the Testicle with Especial Reference to Transplantation—Dr. Karl R. Moore, Professor of Biology, University of Chicago, Chicago.
- 10:30 The Physiology of Sinuses and Their Drainage—Dr. A. W. Proetz, Assistant Professor of Otology and Laryngology, Washington University, St. Louis, Mo.
- 11:30 Myocarditis—A Clinical and Pathological Discussion—Dr. J. B. Clawson, Assistant Professor of Pathology, University of Minnesota, Minneapolis, Minn.

AFTERNOON SESSION

- 2:00 Pediatric Clinic—Dr. Clifford G. Grulee.
- 3:00 Repair of Deformities due to Severe Burns—Dr. Earl C. Padgett, Kansas City, Missouri.
- 3:30 Orthopedic Clinic—Dr. Karl R. Werndorff, Council Bluffs, Iowa.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held its September meeting at the Clay Center Community Hospital, Wednesday evening, September 12. The following doctors furnished a very excellent program: Dr. R. J. Brines of Wichita, spoke on "Ancient and Modern Medical Methods in the Orient." Dr. E. D. Carter, of Wichita, gave a very excellent paper on "Infection of the Maxillary Sinus."

Visiting doctors were Dr. W. J. Eilerts, and Dr. L. A. O'Donnell of Wichita. X. OLSON, Secretary.

MINNEAPOLIS MEETING OF THE NATIONAL AUXILIARY

The sixth annual session of the Woman's Auxiliary to the American Medical Association was held in Minn-



neapolis, Minnesota, June 11-15, 1928. Over 1,200 women registered and they were delightfully entertained and cared for by the local auxiliaries.

The business meetings were largely attended, 400 women being present at the all day session of June 14. Much interest was given to the reading of the papers and State reports. There are now well organized and efficient units in 30 States.

The abstracted proceedings will be printed at an early date and a copy sent to the entire membership.

The following officers were elected:

President: Mrs. Allen H. Bunce, 360 Ponce De Leon Ave. N. E., Atlanta, Ga.

President-elect: Mrs. Geo. H. Hoxie, 3719 Pennsylvania Avenue, Kansas City, Mo.

First Vice President: Mrs. Evarts V. De Pew, 115 E. Agarita Ave., San Antonio, Texas.

Second Vice President: Mrs. David W. Parker, 52 Clark St., Manchester, N. H.

Third Vice President: Mrs. Horace Newhart, 212 West Twenty-second St., Minneapolis, Minn.

Fourth Vice President: Mrs. Frank W. Cregor, 1621 North Meridian St., Indianapolis, Ind.

Treasurer: Mrs. Irvin Abell, 1433 South Third St., Louisville, Ky.

Secretary: Mrs. M. T. Edgerton, 788 Penn Avenue, Atlanta, Ga.

Parliamentarian: Mrs. F. L. Adair, 2500 Blaisdell Avenue, Minneapolis, Minn.

Directors for two years: Mrs. John O. McReynolds, Dallas, Texas; Mrs. Wayne W. Babcock, Philadelphia, Pa.; Mrs. A. Haines Lippincott, Camden, N. J.

Directors for one year: Mrs. F. P. Gengenbach, Denver, Colorado; Mrs. William E. Parke, Philadelphia, Pa.; Mrs. J. T. Christison, Minneapolis, Minn.

#### CHAIRMEN OF COMMITTEES

Organization: Mrs. A. T. McCormack, Louisville, Kentucky.

Health Education: Mrs. Geo. H. Hoxie, Kansas City, Missouri.

Hygeia: Mrs. A. B. McGlothlan, St. Joseph, Missouri.

Publicity: Mrs. T. C. Terrell, Fort Worth, Texas.

Program: Mrs. Southgate Leigh, Norfolk, Virginia.

Finance: Mrs. G. Henry Mundt, Chicago, Illinois.

Entertainment: Mrs. William Kuydendall, Eugene, Oregon.

Public Relations: Mrs. E. H. Cary, Dallas, Texas.

Revision of By-laws: Mrs. Morris Fishbein, Chicago, Illinois.

#### SPECIAL APPOINTMENTS

Auditor: Mrs. C. W. Roberts, Atlanta, Georgia.

Historian: Mrs. E. V. De Pew, San Antonio, Texas.

Committee on Health Films: Chairman—Mrs. John O. McReynolds, Dallas, Texas.

Committee on Resolutions: Chairman—Mrs. J. N. Hunsberger, Norristown, Pennsylvania.

Committee on Credentials and Registrations: Chairman—Mrs. James N. Brawner, Atlanta, Georgia.

Special Advisory Committee: Mrs. S. C. Red, Houston, Texas, and Mrs. Seale Harris, Birmingham, Alabama.

#### WILSON COUNTY SOCIETY

The Wilson County Medical Society held its regular meeting Sept. 11th, at the Loether Hotel at Fredonia, the first regular meeting since June.

Matters of business were discussed; candidates for our legislature have been interviewed and two of them known to be alright toward the Basic Science Act; one will not express an opinion and the fourth is to be seen at once.

Most everyone is intending to attend the Clinics in Kansas City in October, so we will have a short meeting Monday following the Clinic meeting; but for our November meeting we expect to have a good program and ask the neighboring counties to come in with us.

Dr. W. H. Young, County Health Officer, discussed the new regulations of the State Board of Health; no more "fumi-gating!" This seems satisfactory.

EDGAR C. DUNCAN, Secretary.

## DEATHS

Anna K. Masterson Roberts, Lenexa, aged 57, died March 6 as the result of an accident. She graduated from the College of Physicians and Surgeons, Medical Department, Kansas City University, Kansas City, in 1898.

Linnie C. Haynes, Macksville, aged 52, died April 22 of uremia. He graduated from the College of Physicians and Surgeons, Medical Department, Kansas City University, Kansas City, in 1902. He was a member of the Kansas Medical Society.

Lorenzo D. Tout, Cedar Vale, aged 71, died July 14 of heart disease. He was licensed to practice medicine in Kansas in 1901.

### —R— Have You Tried It?

In a silver antiseptic we require, first, activity; second, freedom from irritating effect; third, freedom from straining effect, if possible. It is desirable, too, that the compound be freely soluble in water so that solutions of any strength determined upon may be readily made up; and also that the physician be spared the necessity of weighing out the amount needed for a 5, 10, 15, 20, or even 50 per cent solution. All these desiderata are supplied in a colloidal silver iodide preparation, samples of which are being offered by Parke, Davis & Co. The name of the product is Neo-Silvol. It belongs to the class of mild (i. e., non-irritating, non-escharotic) silver compounds.

### —R— BOOKS

An Introduction to Experimental Pharmacology. By Torald Sollmann, M.D., Professor of Pharmacology and Materia Medica at Western Reserve University, Cleveland, and Paul J. Hanzlik, M.D., Professor of Pharmacology at Stanford University, San Francisco, Calif. Octavo volume of 321 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, \$4.25 net.

This book is intended for a laboratory guide for students in pharmacology. Tests are described for experimental work with various drugs and chemicals. Full instructions are given for animal experiments on the effects of drugs. There are experiments in allergic reactions, anaphylactic shock, and in edema and irritative reactions. A chapter is

also devoted to the treatment of poisons.

Preventive Medicine. By Mark F. Boyd, M.D., C.P.H., Member of Regular Field Staff, International Health Division of Rockefeller Foundation; formerly Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Third Edition. Revised. Octavo volume of 475 pages with 151 illustrations. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, \$4.50 net.

The author has endeavored to present the most important points in preventive medicine. A considerable amount of space is given to drainage and water supply, as well as the disposal of sewage in both rural and urban communities. The ground is thoroughly covered. The author suggests that physicians are neglecting their opportunities to co-operate with the health authorities and warns that a continuation of such neglect will result in the field being taken away from physicians by a changing public sentiment.

The Surgical Clinics of North America (Issued serially, one number every other month.) Volume 8, number 4 (Philadelphia Number—August, 1928) 285 pages with 91 illustrations. Per Clinic year (February 1928 to December 1928.) Paper \$12.00; Cloth, \$16.00. W. B. Saunders Company, Philadelphia and London.

The clinic of Babcock in this number is exceptional both in variety and interest. The following cases are presented: decerebrate rigidity from cerebral injury, large encapsulated meningoma invading the parietal lobe of the brain, skin grafting upon dry bone, palliative transplantation of the breast in cancer, the vaginal approach to the peritoneum, the tolerance of the kidney to trauma and infection, cutaneous phlebolith, ball thrombus in the external facial vein, breaking of the needle in spinal puncture, spina bifida, paralysis of the musculospiral nerve from injection of quinine and urea hydrochloride. Da-Costa's clinic includes carcinoma of the rectum and an interesting case of skull fractures. Deaver discusses "The Chronic Gall-Bladder." There are also clinics by Frazier and Mosser, Nassau, Carnett, Eleason and Ferguson, Pfeiffer and Smith, Shallow, Lee, Speese and Bothe, Gant, Klopp and Kelly.

Recent Advances in Chemistry in Relation to Medical Practice by W. McKim Marriott, M.D., Dean and Professor of Pediatrics in Washington



University School of Medicine. Published by C. V. Mosby Co., St. Louis. Price \$2.50.

This is a series of six lectures intended to summarize the present knowledge of certain important phases of chemistry and to point out the clinical application of chemical principles. The subjects discussed are: Fundamental chemical considerations; acidosis and alkalosis; chemistry of the blood; foods and metabolism; the endocrines.

Ultra-Violet Rays in the Treatment and Cure of Disease by Percy Hall, Hon. acting Therapist, The Mount Vernon Hospital, London and Northwood, etc. Third edition. Published by C. V. Mosby Co., St. Louis. Price \$4.50.

Chapters on sunlight, artificial light; physics, physiology and biology, and hygiene of light, are followed by descriptions of numerous types of lamps used for therapeutic purposes. Then there are chapters dealing with the methods of treatment by actinotherapy of various diseases and the results of such treatment. The author's extensive experience in this field should give unusual weight to his opinions.

Diabetic Manual for Patients by Henry J. John, M.D., Director of the Diabetic department of the Cleveland Clinic. Published by C. V. Mosby Co., St. Louis. Price \$2.00.

A number of books of this kind have appeared on the market, all written for the diabetic patient himself. The author says of this one: "He should find in it a simple explanation of the underlying causes of diabetes, and careful, explicit directions for its treatment, which, while warning him of his constant need for medical supervision, will nevertheless make him confident of his own ability to care for himself and to lead a comfortable, normal life."

Bacteriology for Nurses by Charles F. Carter, M.D. Published by C. V. Mosby Co., St. Louis. Price \$2.25.

This little text book prepared for use in the training school should supply all the information on the subject of bacteriology a nurse requires. Plain and simple language is used and the discussion should be readily comprehended.

—R—

### **Intramuscular Injection of Dextrose**

The intramuscular administration of a ten per cent solution of dextrose in phys-

siologic solution of sodium chloride or distilled water is a practical and relatively safe method for raising the blood sugar level, and is indicated in those conditions in which such a rise is desirable and other methods of administration are contraindicated, says Jerome Glaser, Chicago (J.A.M.A., Sept. 8, 1928). The contraindications to the intramuscular administration of 10 per cent dextrose solution are the contraindications in general to intramuscular injection—the presence of a known hyperglycemia, and possibly the presence of a bacteremia. The maximum rise in blood sugar following intramuscular injection of dextrose solution occurs within half an hour. In one case of hydro-cephalus the intramuscular injection of 10 per cent dextrose solution caused a very marked diminution in the tenseness of the fontanels.

—R—

### **Prolonged Insulin Hypoglycemia Without Symptoms**

In connection with some experiments on the corpuscle-plasma distribution as related to insulin shock, S. J. Maddock and Harry C. Trimble, Boston (J.A.M.A., Sept. 1, 1928), were particularly impressed by the length of time that hypoglycemia can exist before symptoms appear. Experimental evidence shows that, following insulin administration, the blood sugar of diabetic patients and depancreatized dogs may remain at levels of 50 mg. per hundred cubic centimeters or below for from one to six hours without symptoms. Such periods may or may not be followed by hyperglycemic reactions. They believe that this phenomenon, whose dangers are evident, is probably frequent in occurrence; that it usually is unrecognized, and that it may account for the difficulty so often encountered in regulating the administration of insulin. It is tempting to the authors to reason by analogy that if continued high blood sugar overstrains the pancreas, continued low blood sugar may over rest it.

—R—

### **Case of Hematuria From Shoe Dye Poisoning**

O. J. Schmitt, Hollandale, Minn. (J.A.M.A., Sept. 8, 1928), cites the case of a boy, aged 17, of athletic stature, who

wore freshly dyed shoes for seven hours, when cyanosis and headache made their appearance. When seen, three hours after the onset of the symptoms, his face and finger nails were deeply cyanosed and he complained of severe frontal headache. The rate and character of the pulse, respirations and temperature were normal. He was advised to bathe the feet repeatedly in water; to take a sponge bath and a purgative; to drink large quantities of water; to put an ice cap on the head, and to rest near an open window. The cyanosis and headache had entirely disappeared by the next morning, but the patient was advised to remain quiet. The urine the following day was a clear, dark amber, acid in reaction, and with a specific gravity of 1.025. Two days later the patient complained of dysuria and bloody urine. The blood pressure was 124 systolic and 80 diastolic; the red cell count, 4,120,000; leukocytes, 11,850, and hemoglobin, 75 per cent (Tallqvist). Alkaline drinks, together with a bland diet and rest in bed, were ordered, and in the following two days the pain gradually disappeared, the urine resumed its normal clear amber color, and at the end of five days no red blood cells could be found microscopically. The analysis of the dye as reported by the chemist showed aniline as the source of poisoning.

—R—

#### **Diseases of Children Benefited By Splenectomy**

Roger L. J. Kennedy, Rochester, Minn. (J.A.M.A., Sept. 22, 1928), deals with the diagnosis, results of treatment and pathology of the spleen in a group of children observed at the Mayo Clinic since 1920. Splenectomy was advised for thirty-six children aged less than 15, and the operation was performed on all but one. The preoperative diagnosis in this group were hemolytic icterus in eighteen cases, hemorrhagic disease in ten cases, and splenic anemia in seven cases; it was not determined in one case. Splenectomy was performed for hemolytic icterus on seventeen children. All recovered from the operation. One died later from other causes. The test of the fragility of the erythrocytes is the most useful single diagnostic criterion for

hemolytic icterus. It was increased in all cases and did not return to normal following splenectomy. Splenectomy was performed on ten children because of purpuric manifestations. All recovered from the operation. One died from hemorrhage following tonsillectomy six weeks later. One patient showed a normal platelet count, one showed the characteristics of hemophilia, hemorrhagic purpura and aplastic anemia, and one, who died following tonsillectomy six weeks after operation, was found to have had aplastic anemia. There is still considerable doubt as to the exact significance of the platelet count in diagnosis. Splenectomy was performed on seven children for splenic anemia. All recovered from the operation but three died later from other causes. At one operation a chronic inflammatory condition was found and was classified as chronic infectious splenitis. The diagnosis of splenic anemia covers a heterogeneous group of conditions in which anemia, leukopenia and splenomegaly are present. It is highly desirable that better criteria be established for classification. A case with puzzling features was found to be chronic infectious splenitis with secondary cirrhosis of the liver. It is probable that early splenectomy in certain conditions will prevent progress, and in some cases will result in a decrease of secondary hepatic cirrhosis. The microscopic changes in these spleens are not characteristic of the diseases.

—R—

#### **Relation of Bladder Pressure to Bladder Function**

Edwin W. Hirsch, Chicago (J.A.M.A., Sept. 15, 1928), devised a method for observing the behavior of the bladder muscle under various conditions. A comparison of the tracings obtained from bladders normally distended with those in which irritating solution was substituted for urine showed a great similarity. As the result of his observations Hirsch concludes that the so-called bladder contraction is due to the periodic intraabdominal waves which are caused by contraction of the diaphragm. Ordinary psychic states and sensory conditions do not affect the bladder directly, although there is a temporary obliteration of the



normal bladder wave. This is the result of inhibition of respiration which controls the intra-abdominal pressure and the bladder wave. Intense psychic reactions will greatly augment respiration and stimulate urination by increased intraabdominal pressure waves. Violent contraction of the diaphragm, as in coughing, will greatly augment the bladder pressure. Decompressing the over-distended bladder by the drop method is simple to perform and conforms to physiologic principles. The bladder wave is maintained and there is no sudden drop in pressure. Frequent removal of small quantities lessens the power of the muscle to exercise its maximal power of contraction. Decompression by the drop method obviates the necessity of frequent catheterization.

—————R—————

#### **Erythropoietic Response of Various Anemias to Liver Therapy**

Additional confirmation of the specific value of liver and liver extract in pernicious anemia has been gained by William S. Middleton, Madison, Wis. (J.A. M.A., Sept. 22, 1928), from the treatment of thirty-two cases at the Wisconsin General Hospital. Fourteen of forty patients with secondary anemia responded favorably to the dietary regimen of Minot and Murphy. This response was apparently not to the specific maturing factor in liver, since no reticulocyte showers comparable to those in the remission of pernicious anemia occurred on the diet. The failure of erythrocyte and reticulocyte response in the six cases of secondary anemia treated with liver extract lends strength to this position. The necessity for further work on this question is appreciated, particularly in view of the difficulty of controlling all factors of possible influence on the blood picture of secondary anemia. The indiscriminate use of liver in all types of anemia should be discouraged as confusing the picture of undiagnosed blood diseases, creating an empiric practice and establishing an economic burden for the unfortunate patients with pernicious anemia, to whom liver has proved an inestimable boon. The use of liver and liver extract in the treatment of secondary anemia is an experimental problem, the solution of which

depends on a close study of these cases, preferably in the clinic and the hospital. Copper is apparently not the active agent in inducing remissions in pernicious anemia. Its status in other forms of anemia in the human being has not been fixed.

—————R—————

#### **Anemia and Other Blood Changes in Syphilis**

Clyde L. Cummer, Cleveland (J.A. M.A., Sept. 8, 1928), points out the fact that other causes must be excluded before making a diagnosis of syphilitic anemia. Syphilis may be merely associated with the anemia and may not be its actual cause. Anemia may appear at any stage of the disease. It may appear early in the stage of constitutional invasion but is not a constant feature. It is more frequent in women than in men, and is usually mild and of secondary type. There is no final proof that syphilis may produce an anemia of pernicious type. In the later stages of syphilis, anemia may accompany visceral changes, such as aortitis, gastric syphilis and hepatic syphilis, and it may be a feature of syphilitic cachexia. The anemia of late syphilis may be accompanied by splenomegaly. The clinical picture bears a close resemblance to Banti's disease. The clinical picture of leukemia has been simulated by syphilis. Paroxysmal hemoglobinuria has been attributed to syphilis. A large proportion of cases show a positive Wassermann reaction, and the literature gives many instances of clinical cure or improvement after antisyphilitic treatment. In general, the consensus is that both mercury and arsenic must be used with caution in the treatment of anemia in syphilis, for a reduction in hemoglobin and number of red cells may result. The recent literature offers little regarding the influence of the iodides. Transfusions have a place in bringing the blood to a point at which antisyphilitic medication may be employed safely. Splenectomy has proved beneficial in splenomegalic anemia after failure of specific therapy. He illustrates his conclusion with five cases.

### Aplastic Anemia

Aplastic anemia, as a cause of illness is relatively rare. As a cause of anemia, however, it is relatively common. W. W. Duke, Kansas City, Mo. (J.A.M.A., Sept. 8, 1928), believes that the symptoms depend on the primary cause of the illness and on the element red cell, leukocyte or platelet which is most profoundly reduced in number. For this reason, the prominent symptoms may be those of anemia, infection or purpura hemorrhagica. Indications for treatment depend on the cause of the illness, its acuteness, and on which of the formed elements of the blood are most markedly reduced.

—R—

### Immobilization in Pulmonary Tuberculosis Preliminary Report of New Method

S. C. Davis, Tucson, Ariz. (J.A.M.A., Aug. 25, 1928), suggests that in incipient cases of tuberculosis local as well as bed rest be instituted. Until phrenicotomy and pneumothorax become more popular, a simple but effective appliance should be used. In cases in which pneumothorax is impossible or is refused, in which the pathologic changes on the opposite side contraindicate its use, or in which there is involvement on both sides, one side can be given local rest until improved, and then the other side can be treated. This appliance is especially indicated when the disease condition is at or near the base, whether it is tuberculosis, bronchiectasis or nonsurgical abscess. He describes his appliance.

—R—

### Hormone Test For Pregnancy

A. C. Siddall, Cleveland (J.A.M.A., Sept. 15, 1928), reports on ninety-seven tests, the results of which, in general, confirm previous observations. This test for pregnancy is based on the effect of the injection of gravid female blood serum on the uterus and the ovaries of white female mice. The term hormone test is proposed because the test is for the probable presence of hormones. The hormone test showed a high degree of accuracy in a total of 142 cases, which indicates that the procedure is of practical value. The test is reliable early and late in pregnancy. The hormone test can be used for the qualitative determination of

the potency of commercial liquid extracts of ovary, placenta, and probably the anterior lobe of the pituitary.

—R—

Murray: "If you had \$1,000, what kind of a car would you buy?"

Payne: "A \$2,000 one."

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### POCKET MANUAL ON BLOOD PRESSURE

By

J. T. SCOTT, M.D., F.A.M.A.

St. John, Kan.

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The Journal of the Kansas Medical Society reviews the Manual in the Sept. issue as follows—

The author has presented here in a very convenient pocket manual what every practitioner ought to know about blood pressure. He describes the best methods for determining the blood pressure and he has very carefully stated the significance of the various deviations from the average normal. To the conclusions drawn from his own extensive experience he has added many valuable data from the literature on the subject. One is impressed with the thoroughness, the accuracy and the conciseness with which he has covered this important subject.

Dr. B. B. Grover, author of a book on Blood Pressure comments as follows:—

With considerable interest I have read your Manual on Blood Pressure and it appears to cover quite well the essentials in such a manner that the busy physician will not only read it but profit thereby. Your little book is a valuable contribution to blood pressure literature.



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### How the Physician Can Help to Conserve Vision and Prevent Blindness

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I wish to speak to you of the opportunity and privilege—nay, as I see it, the duty—of every general physician in respect to the conservation of that most precious of human possessions, vision, and the prevention of that most terrible of human afflictions, blindness. But you will say to me that this duty is solely the concern of the eye physician.\* I shall be glad to acknowledge that it is his concern, but I shall deny that it is his sole concern.

You will agree with me, I presume, that at least in rural communities, the appeal of the sufferer from any ailment or disability is first of all to his family physician. Inspired by a confidence engendered by years of skillful ministrations, the doctor is assumed to possess some knowledge of all branches of medical practice, so that his advice is sought in regard to ailments and malfunctions of all parts of the body. Burdened as he is with the multifarious and exacting duties and responsibilities of a general medical and surgical practice, it is not to be expected that the practitioner shall possess a detailed knowledge of ophthalmology. But he should have enough knowledge of eye diseases and injuries to act intelligently in ophthalmic emergencies, and to give sound advice when confronted by the questions of his patients concerning the eyes and eyesight of themselves and their children. It is the purpose of this communication to suggest what should be done, and what should be told.

The physician's first opportunity to

In this paper the term "eye physician," which has recently been suggested by the Guild of Prescription Opticians as a substitute for the frequently misunderstood and misused term "oculist," is used. As the name implies, it refers to the doctor of medicine who practices ophthalmology.

save sight begins with the advent of the newborn child. If he is dealing with a maternal infection, he will be especially zealous in observing the condition of the baby's eyes for a week following birth. I assume that no one in this audience is so willfully negligent as to omit prophylactic "drops" in every case of confinement, no matter how remote may seem to him the chance of infection. Let us recall that a substantial minority of serious ocular infections in the newborn arise from microorganisms other than the gonococcus. There is therefore no reason to abstain from the use of "drops" on the assumption that their use will cast a stigma on the morality of the parents. And what prophylactic shall be used? There is none better than the easily procured one per cent solution of nitrate of silver.

When the difficult labor calls for the application of forceps, the accoucheur should always bear in mind the possible chance that one blade may lie over an eye. The resultant pressure may produce a porcelain like infiltration of the cornea, a paralysis of one or more of the eye muscles, or lesions of the retina or choroid. Even more serious accidents, such as divulsion of the globe from the socket, have occurred as a result of the "gouging" effect of the end of the forceps blade.

When the infant has passed into childhood, the physician's advice is most frequently sought about eye injuries and cross eyes. It is not my purpose to discuss eye injuries in detail, but simply to state that apparently trivial injuries may have serious potentialities. One should never fall into the error of estimating the extent or the seriousness of an injury from the "looks" of the eye. Many a seriously injured eye may differ little in appearance from its uninjured fellow. The only safe course to pursue is to regrettable but undeniable fact that many

gard every eye injury as "serious" until searching examination and long observation have proved the contrary.

And now a word about "cross eyes." I am sure that eye physicians will agree that only in the rarest instances are cross-eyed youngsters brought under observation early. Usually the "do nothing" policy has been pursued for from one to five years. The mother, when chided for neglecting the child, falls back on the alibi that she was told that the child was too young to wear glasses, that a period of watchful waiting was the necessary precursor to a later operation. When interrogated as to the source of this information, the family physician is usually designated.

No one likes to furnish misinformation, and the physician, I imagine, would be a little touchy about giving parents advice about the ocular status of their children that must, perforce, be later branded by the eye physician as pernicious error. And how simple it is to give correct advice! Instead of counselling delay, advise immediate attention by the best eye physician you know. No child is too young to receive some form of ocular treatment looking toward the preservation of the vision of the squinting eye, though some are too young to make it feasible to fit them with glasses. It does not seem to be generally appreciated that the neglected squinting eye soon begins to lose its sight, and may, if the neglect be long continued, become practically blind. When that point has been reached, it is usually impossible to restore the lost sight. Such an eye may, indeed, be straightened, sometimes by glasses, oftener by operation, but it is useless from the standpoint of vision. If the cards were not stacked against the eye physician, most cases of squint could be cured. By "cured" is meant the restoration of vision of the squinting eye, the reestablishment of parallelism of the visual axes, and the development of binocular single vision. In some cases this could be accomplished by glasses and orthoptic training; in others, operation would be required as a supplementary procedure.

In respect to one eye disease that affects childhood and youth, every practi-

tioner may, unwittingly, in the ordinary course of practice, do much to prevent visual impairment. It is now a well established fact that hereditary syphilis can, to an almost incredible extent, be prevented by intensive anti-syphilitic treatment of the expectant mother. If the child escape the other ravages of syphilis, it will escape the keratitis which, from the time of Hutchinson, has been part of the well known triad: interstitial keratitis, nerve deafness, and the characteristic teeth. If such a patient comes with the disease developed, a long course of specific treatment will usually partially restore vision.

And what of the other keratitis that so frequently attacks poorly nourished or improperly fed youngsters in the summer months? One is not apt to think of phlyctenular keratitis as a sight-destroying disease, but it is a very important factor in vision impairment. Jackson has recently pointed out that the thin, almost invisible corneal scars left as a result of the disease may, in later years, through the influence of the degenerative processes of age, become much denser, and lead to very grave visual impairment. An improvement in the living conditions and correction of improper diet are rather more important than local treatment. It is clear that the practitioner's general care in this disease may be quite as important as the local attention of the eye physician.

And now, as we follow our youngsters into the schools, we encounter a different type of ocular problem, viz., the struggle of the child with moderate or high errors of refraction to meet the requirements of study. The utter inability of a child with a high farsightedness or astigmatism to concentrate on the printed pages is well known to the eye physician. The struggle to use the tortured eyes in the acquirement of his lessons is often too severe, and he is relegated to the role of dunce, the despair of parent and teacher alike. How may a child with such a defect be discovered? Frequently he does not complain of his eyes at all. Finding that he cannot keep up, he follows the path of least resistance by refusing to study, an attitude which confirms the parent and



teacher in the belief that the youngster is dull.

Medical examinations in our public schools are by no means universal. I suspect that the vast majority of children attending rural schools are not examined at all. Even in the large cities the methods employed in examining the eyes are not sufficiently searching to discover all children who require spectacles. I do not know what may be the routine in the schools of Kansas. In St. Louis, the school physician or nurse makes a simple acuity test at twenty feet. If lowered acuity is discovered in one or both eyes, or there is found some obvious disorder of the anterior segment, a card is sent to the parents, stating that the child's eyes are in need of attention, and to seek advice from the family physician. Right here there is apt to be a slip. It is a re-physicians, in common with most of the laity, fail to discriminate between the optician and optometrist on the one hand, and the "eye physician" on the other. Even those that do discriminate seem to imagine that the optometrist is the one to be chosen for a fitting of glasses, while admitting that the eye physician is the one to handle inflammations and injuries of the eyes. Does the physician who thoughtlessly sends the youngster with poor sight to the optical eye tester around the corner stop to consider that by so doing he is betraying the confidence imposed in him by the public? An accurate determination of the refractive error in a child's eye (and without an accurate determination, the work had better not be attempted at all) cannot be made by the limited methods which the law enforces on the optometrist. The latter, not being a physician, is not permitted to employ dilating drops, and without dilating drops, an eye test in a child is a ridiculous farce. I have recently examined a ten-year old youngster who, two weeks previously had been given glasses by an optometrist—minus spheres for an assumed myopia. The test under atropine revealed a total farsightedness of four dioptries. The patient accepted with good distance acuity and relief from headache and blurred vision, plus 2.5 sph. Similar ex-

periences could be related, I am sure, by every eye physician.

The adult population will no doubt continue to patronize the optometrist. Some will be satisfied with his mediocre services. Others will eventually be forced to a realization that ocular comfort can only be attained by the thoroughgoing ministrations of the eye physician, and will voluntarily seek his services. In these days of legalized eye testing by non-medical persons, it is no more possible to prevent the public from visiting the optometrist than it is to keep them from buying bromo-seltzer at the drug store. But it is reasonable to expect that physicians shall refrain from abetting the un wisdom of patients by referring them to eye testers who, even in their chosen field, are compelled to adopt incompetent methods. And in the not rare case where deficient vision depends on intraocular disease, the consequences of an eye test by one not medically trained are dire indeed. Bright's disease, diabetes, tuberculosis, syphilis, focal infection—all may bear a direct causative relation to retinitis, choroiditis, optic neuritis, etc., and cannot be cured by a pair of glasses.

I do not know whether Kansas has yet been threatened by so-called "eyesight surveys." They are even now being conducted in Missouri. The method is as follows: An attractive circular is presented to the manager of a given industry setting forth the advantages that will accrue to the industry and the employees from a determination of the vision of employees. This survey is to be conducted by optometrists without cost to the employer, and, if glasses are needed, they will be supplied at reduced rates by the optometrist. All this sounds very attractive to the manager, who, no doubt, is one of the unthinking public who would go to an optometrist for his own glasses. The scheme is all the more alluring by reason of the fact that the optometrist brings his testing equipment right into the factory, and furnishes a record of the acuity and other data to the plant manager. As this is a purely commercial venture, every employee is a potential candidate for glasses. Those that need glasses are fitted (?) by the same

incompetent methods that obtain in the office of the optometrist. And again there is the same certainty that in some cases grave intraocular disease causative of poor vision will be overlooked.

I am not acquainted with the prevalence of trachoma in Kansas. In Missouri, more especially in the southwestern or Ozark region of the state, it is extensive and prevalent. The victims of this disease are for the most part very poor, and it may be that undernourishment, the handmaiden of poverty, is an important factor in its causation. If these patients are not destitute to begin with, they soon become so by reason of their incapacitating and chronic eye affection. If you encounter such unhappy victims direct them to one of the trachoma hospitals maintained by the U. S. Public Health Service. The one nearest your state is at Rolla, Missouri. Another is situated at Russellville, Arkansas. They are manned by thoroughly competent U. S. Public Health surgeons, experts in trachoma. One may feel assured that any trachomatous patient referred to either of these hospitals will receive modern scientific treatment. The hospital care and medical service is entirely without expense to the patient.

I presume that those of you who practice in agricultural communities have one or more patients with chronic inflammation of the tear sac. The trouble can be recognized almost at a glance: the eye is constantly watering, the lids are reddened and thickened, a purulent discharge is present. The diagnosis may be clinched by the appearance of pus on pressure over the site of the sac. Such patients are in constant danger of developing a serpent ulcer of the cornea with possible loss of the eye, and should be strongly urged to have the purulent sac removed, or its mucous membrane cauterized.

The subject of ocular injuries has been dealt with by one of my colleagues. I will only encroach upon his field to speak of the duty of the physician when he is consulted by the victim of a serious lacerating wound that has resulted in the total loss of sight and shrinkage of the globe. Every case of this sort carries, potentially at least, the danger of sym-

pathetic ophthalmia. Many of these bearers of eye stumps are vastly more disfigured than if they were wearing a good fitting artificial eye. An appeal to their vanity is usually unsuccessful, as they have never taken much account of "looks." A simple, straightforward and earnest statement of the danger of sympathetic disease, and its rapid progress toward blindness, once it is established, will absolve the practitioner of any share of responsibility should blindness ensue as the result of disregarded advice. It has been my observation that such cases have usually occurred as the result of incompetent care of a serious eye injury by one who has had no eye training. Himself ignorant of the danger of sympathetic ophthalmia, he says nothing to the injured man of the possible danger to the uninjured eye, and the disease may be well established before the eye physician's services are sought. Remember, every blind shrunken eye is a possible source of danger. It would be much safer if all such eyes were removed.

The busy practicing physician usually loses all but the haziest recollection of his medical school eye course. But one thing he does remember, viz., that atropine is often used as an eye medicine. It is perfectly natural therefore that when he encounters an inflamed eye he will be apt to prescribe a collyrium containing this drug. If the inflammation is merely a conjunctivitis, the drug will not cure, but it will at least do no harm. But if the red eye is the congestion of an acute or subacute glaucoma, the most terrible disaster is almost certain to follow: an intense exacerbation of the trouble, with increase of tension to stony hardness, resulting in irremediable blindness.

The differential diagnosis between acute glaucoma and acute iritis is readily made by the experienced eye physician. He can then with safety apply the appropriate drops, pilocarpin or eserine, in the one case; atropine, in the other. If the practitioner be confronted with a symptom complex consisting of congestion, ocular pain, headache, and diminished vision, and there is the slightest doubt in his mind as to the differential diag-



nosis, let him refrain from using atropine. Better a thousand times that pilocarpin or eserine (miotics) be used in a case of iritis than that atropine (mydriatic) be used in a case of glaucoma. Better still, if a skilled eye physician be within a hundred miles of where you practice, put no drops of any kind into the affected eye, but rely upon the hypodermic or morphine to give temporary relief. Then without delay get your patient to the eye physician, and let him bear the responsibility of diagnosis and treatment.

This leads directly to a consideration of the immense responsibility that rests upon the practitioner in respect to that insidious destroyer of eyesight, chronic glaucoma. As silently as the passage of a cloud over the sun, this malignant enemy of eyesight creeps on its unconscious victim. The danger would be less if there were ocular pain, but that is rare. There may be temporary obscuration of vision, with the appearance of colored haloes around lights. It not rarely happens that one eye is blinded and the sight of the other seriously compromised before the diagnosis is made. Every eye physician will testify to the fact that only in the rarest instances does the victim of chronic glaucoma come under his observation sufficiently early to insure the full benefit of anti-glaucomatous treatment. He is compelled perforce to deal with eyes that have been almost wrecked by the disease too long unrecognized.

*Chronic glaucoma is the great tragedy of ophthalmology.* The blindness from chronic glaucoma could almost always be averted or indefinitely postponed but for the existence of three factors: first, the carelessness of the sufferer himself; second, the improper advice given to the sufferer by the family physician; and third (and I regret to be compelled to make this statement), the inability of some men professing to be eye physicians to make a correct diagnosis. To the middle aged or elderly person, failing vision is usually an indication for one thing only: stronger glasses. Nine times out of ten, these are secured through the optometrist who practically without exception fails to inform his pa-

tron of the existence of ocular disease, even if he suspects it. As the lenses provided usually slightly improve central vision, it is natural that the sufferer should return from time to time for a re-test. Thus months and years may be frittered away before the eye physician has the first chance to make an examination.

Some sufferers, dissatisfied with their glasses, begin vaguely to suspect that something is wrong, and appeal to the practitioner for advice. Upon him (did he but know it) rests a heavy responsibility, one fraught with grave potentialities. Upon his answer may depend the momentous issue of future blindness or future sight.

It is not unlikely that the suspicion of "cataract" has entered the mind of the patient, and all too often this erroneous and fatal mistake is confirmed by the improper advice of the family physician. I take it that the "snap judgment" in practically all such cases is that the trouble is "cataract." Based on this erroneous diagnosis, improper advice is given, advice which leads to delay in seeking expert examination, and hence delay in securing adequate treatment.

Why is this sad error repeated day in and day out? The reason is not far to seek. Cataract is much more frequently the cause of failing vision than chronic glaucoma. It is not unlikely that in the nine preceding cases of this sort that have been brought to the attention of the general physician, the trouble was actually cataract, and the advice to "do nothing until the cataract is ripe," if not strictly in accord with the best ophthalmological opinion, did not preclude the eventual restoration of vision by operation. But the tenth case was not cataract, but glaucoma, and when, after the lapse of years the blinded eyes are presented to the eye physician, it becomes his embarrassing duty to explain to the physician the true nature of the case, and to try to square him with the patient whom he has permitted to drift into irremediable blindness.

Is not this a grievous picture, gentlemen, and one that challenges every one of us? To realize that through thoughtlessness one has given advice that has

led to such wretchedness! And how simple it is to avoid this pitfall! Let us grant that the diagnostic ability of the practitioner is insufficient to distinguish between chronic glaucoma and cataract. If the practitioner will assume that every case of failing vision in an elderly person not satisfactorily helped by glasses, and in which the patient himself suspects that "something is wrong," is *glaucoma*, he will have discharged his primary obligation to the patient. Knowing the hazards of delay in glaucoma, the practitioner will insist on an immediate examination by the most competent eye physician of his acquaintance. If the condition prove to be cataract in an early stage, the eye physician can greatly aid vision by the careful adjustment of glasses, local treatment, and hygienic regulation. If early glaucoma be present, appropriate treatment will give the patient the best chance of retaining his vision. By this simple change in attitude the number of cases of chronic glaucoma that reach the office of the eye physician beyond the possibility of help by treatment or operation, will be enormously lessened.

The danger that such conditions as retinitis and choroiditis may be overlooked is not great, as the impairment of vision usually leads the patient to consult an eye physician. Optic neuritis is usually attended by positive and alarming loss of vision, but not always. The mechanical stasis of the nerve head (choked disc), dependent on increased intracranial pressure, may not in its early stages cause visual impairment. Yet such eyes are seriously menaced. The best hope of preventing blindness lies in an early diagnosis of the intracranial lesion and operation by the neurosurgeon.

A word in regard to school hygiene of the eyes. Some of you may be members of Boards of Education. Others may be in close touch with such members. All should be concerned with the proper lighting of schoolrooms, their ventilation, the use of textbooks with fairly large type, the installation of chairs and desks adjustable to the sitting height of the child. The education of the child with partial vision (albinos, congenital par-

tial cataracts, corneal scars from trachoma or ophthalmia neonatorum, high myopes) is a special pedagogical problem, which has been met by the establishment, in large cities, of special classes for these defectives with special equipment for teaching them. I recognize the difficulty of handling the problem satisfactorily in smaller communities. Perhaps the ultimate solution will be the establishment of state schools for the semi-sighted just as now we have state schools for the blind.

If you have a commission for the blind or a state association for the blind, endeavor to learn its purposes and aims, so that you may be ready to enlist its aid should you encounter a person irremediably blind. As death marks the unsuccessful result of the patient's and the doctor's fight against disease and accident, so does blindness mark the failure of all agencies inherent in the patient and the eye physician to preserve sight. But while death ends all, blindness may be the beginning of a living death for him who does not receive spiritual guidance and above all the intelligent help of an agency fitted to cope with the problems of blindness. As in the dark hour of the passage of a soul to its eternal rest, you are able by kindly words and sympathetic bearing to give comfort to bereaved ones, so may you in the dark hour of blindness, give intelligent advice and encouragement to the unfortunate one who henceforth must live in the blackness of night.

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### Management of Eye Injuries

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Read before the Kansas Medical Society at its Annual Meeting, May 8-10, 1928, at Wichita, Kansas.

This paper is limited to the consideration of injuries to the eyes caused by foreign bodies, which comprise the largest number of injuries coming to the average physician for treatment. In rural communities as well as in cities a large number of these injuries are first seen by the general practitioner. In some instances it will be impossible for him to have the assistance of an ophthalmologist, or possibly the patient must be sent some distance before he comes under the care of a specialist. For this reason



every physician must have a considerable acquaintance with the diagnosis, care and management of eye injuries. With these facts in view the writer has endeavored to present the subject in a way which he hopes will be of interest to the general practitioner, rather than the ophthalmologist.

The rapidly increasing use of machinery in all types of industry has resulted in a commensurate increase in the injuries to the eye and its appendages. Statistics show that about one-twelfth of the non-fatal industrial accidents are accidents of the eyes, and about one-tenth of the blindness in this country is due to industrial injuries.<sup>1</sup>

As in all modern ideas of disease, an important factor in the management of eye injuries is the prevention of them. The wearing of protective glasses, and the placing of guards on machines will prevent the largest number of these injuries from occurring. This has been proven during the past few years by industries which have made compulsory the wearing of protective goggles by employes engaged in hazardous occupations, and the placing of guards on machines capable of producing flying fragments of metal. There has resulted from this practice a tremendous decrease in accidents to the eyes, caused by flying particles of steel, carborundum, nails, etc. The head of the safety department of one of the large railroads told me recently that in his company the number of eyes lost from such injuries has decreased from over a hundred in a year to less than a half dozen during the past year, since the compulsory wearing of protective goggles and the provision of guards on machines. He did not have available the exact figures, but that was an approximate proportion.

By these industries a goggle is furnished which will not shatter nor fly when struck by iron or heavy substances. These of course, furnish the maximum protection; any kind of goggle or glasses, however, furnishes great protection to the eyes of the wearer. No one should use an emery wheel, or use a hammer to strike iron or hard metal without having on at least a pair of glasses. Education along this line of prevention will save

many eyes which are now lost every year.

The most common injuries to the eyes are those which occur as a result of blows in and near the orbit, flying particles of steel, iron, copper, brass, glass, and stone which strike the eye, lacerate the lids or lodge in the conjunctival sac, embed themselves in the cornea, sclera, and choroid, or penetrate deeper into the globe involving the anterior chamber, the iris, the lens, the vitreous and the posterior coats of the globe, or penetrate the entire globe and lodge in the orbit behind the globe. With considerable frequency are seen burns of the lids and eye, due to contact with hot metal and chemicals such as strong caustic solutions, acid solutions, and explosive flames.

A careful examination is of great importance in the care of any injury to the eye, no matter how trivial it may seem when first seen. Remember that an eye may harbor a small piece of steel within its structure without the knowledge of the patient, and without a definite history as to the time of entrance. He may come complaining of only a slight irritation of the eye or slight blurring of the vision, and assert that he has had no serious injury whatever. A careful examination including *x-ray* may reveal a metallic sliver or fragment in the lens, vitreous, or posterior segment of the eye.

This is illustrated by two cases which came under our care within the past year. The first was a young man who was driving a metal hoop on a barrel with a hammer and cold chisel. He felt something strike his eye and supposed some small piece of splinter or dust had flown from the barrel. He paid no attention to it and continued to work as usual for several days before coming to our office to see if we could see something in the eye. He complained of no pain, only a slight watering of the eye and moderate blurring of vision which he attributed to the watering. Examination with *x-ray* showed a small fragment of metal in the posterior segment of the eye.

The second case was a man who received an injury to the upper lid while driving a heavy piece of steel with a large sledge. The physician who first

saw him and made the examination, placed a bandage on the eye, and next day on account of the severe pain in the eye, sent him in (over a hundred miles on the train) to our office. Upon opening the lids, and exposing the upper fornix, there was found a rough arrow-shaped piece of steel about 8x4x3 mm. which had been in the eye twenty-four hours, causing the patient severe pain and the eye unnecessary irritation.

If the eye is painful and sensitive to light, the first step is to instil two or three drops of a sterile two per cent solution of butyn or cocaine. Cocaine solutions are not used so frequently as formerly on account of the roughening of the cornea it produces. Butyn does not have this disadvantage and produces good anesthesia. It does cause a moderate injection of the conjunctival vessels which is avoided if a few drops of 1 to 1000 epinephrine hydrochloride is instilled with it.<sup>2</sup> This anesthetic solution is instilled three or four times at five or ten minute intervals until the eye is more comfortable and the examination proceeds with much better results. The eye should be cleansed with a mildly antiseptic solution, and the skin surrounding rendered as nearly clean as possible. The lids are first inspected, noting whether there are cuts or punctures evident on the surface. Then the lids are separated with the thumb and finger so as to completely bring into view all of the cornea and as much of the sclera as is possible. This part of the eye is inspected generally with the object of noting whether the general anatomy of the eye is intact: that is, whether the cornea is smooth, the anterior chamber clear and filled, the pupil round and black, and the iris intact. If the anterior chamber is filled with blood it is impossible to view the cornea, lens and posterior segment of the eye with the ophthalmoscope.

The question may arise here as to whether or not the general practitioner should be familiar with the use of the ophthalmoscope. I believe he should have a working knowledge of this instrument. He has plenty of opportunity to practice its use, and by so doing he becomes more and more familiar with a most useful in-

strument. The neurologist is an example of a specialist other than the ophthalmologist who practices the use of the ophthalmoscope. I do not advocate that the general practitioner with insufficient training should attempt to diagnose pathological conditions of the fundus. I do believe, however, that he may learn to examine the cornea, lens and media of the eye, noting at least that they are clear, and deducing from his failure to see through them that a serious condition exists in the eye.

With the ophthalmoscope there may be seen puncture wounds or foreign bodies in the cornea, injuries to the lens, or foreign bodies in the anterior chamber, vitreous, or retina. As a general rule, however, it is impossible to see clearly the posterior segment of an eye retaining a foreign body on account of the damage done its structure, and the exudates encountered.

The *x-ray* has become the most useful of all aids in determining the presence or absence of metallic foreign bodies retained in the globe. With it even minute particles of metal can be seen and localized. This enables the operator to choose the most favorable route of removal. Fortunately the magnetizable metals are clearly shown by the *x-ray*, and are the ones which offer the best chances of successful removal through the use of the magnet. Copper, brass, glass, and stone fragments being non-magnetizable offer the greatest difficulty of removal, especially when situated deep within the structure of the eye, the last two being difficult, if not impossible, to demonstrate with *x-ray*.

Not many years ago it was the custom to subject an eye in which a metallic foreign body was suspected, to the magnet test. The magnet was applied and the presence or absence of a magnetizable foreign body was determined by the pull and pain experienced by the patient when the test was positive. This practice located many foreign bodies in the eyeball, and enabled many an operator to successfully remove them, but it had the disadvantage of the possibility of producing injury to uninjured parts of the eye by the moving of the foreign body violently toward the magnet, the oper-



ator not knowing the exact location of the foreign body. The magnet, however, is the most useful instrument we have in removing magnetizable foreign bodies from the interior of the eye after they have been located by the *x*-ray.

If a foreign body is suspected in the conjunctival sac the lids must be everted and careful search made with patient looking up or down so as to bring into view the upper and lower fornices. For small foreign bodies in the cornea, a magnifier or loupe is of great assistance. The Hardy-Beebe loupe is a good one and inexpensive. A little practice with this loupe will enable the wearer to easily see foreign bodies in the superficial layers of the cornea which are very difficult to detect with the eye alone. If no loupe is available, a pair of plus two or three lenses such as are found in the average home, worn over the operator's eyes or spectacles, will assist materially in locating such a small foreign body. If one is found it may be removed with a spud or bayonet pointed knife, provided the cornea has been thoroughly anesthetized. The lids are separated and the patient is directed to look straight ahead at some object which facilitates in keeping the cornea stationary. The foreign body is lifted from the cornea, care being used to denude the cornea of as little epithelium as possible. If the foreign body is fragile as in the case of cinders or emery, it may be removed in pieces and care must be used to see that none is left. After removal the conjunctival sac should be flushed thoroughly, a few drops of mercurochrome, two per cent solution, instilled and a bandage applied. With particles embedded deeper in the cornea considerable difficulty is experienced in their removal and more or less trauma is produced. In these cases it is well to add to the preceeding toilet one or two drops of an atropin solution, one grain to the ounce, and cover the margin of the lids with a one per cent yellow oxide of mercury ointment. The eye is then bandaged.

I am in the habit of putting a small gauze sponge over the eye, fastening it in place with adhesive strips, putting one strip across to the nose parallel with the lid margins, and two more at right

angles to this from brow to cheek, thus endeavoring to keep the lids closed so that they will not come open with the use of the opposite eye. The patient is told that there will be some discomfort in the eye that day; that he may use an ice bag or hot water bottle, and to leave the bandage alone until he returns to the office the following morning.

A practice exists (which is all too common) of having some of the fellow workmen in machine shops endeavor to remove foreign bodies from the cornea. They frequently use a match which has been sharpened to a point to remove them, and while they probably are successful in many cases, in others they only succeed in burying the foreign body deeper, or denude the cornea to such an extent that, with the lack of antisepsis employed, an infection is occasionally introduced with a corneal ulcer as the result.

Some foreign bodies in the cornea are so minute that they are very difficult to find even with the loupe. If the pupil is dilated with a drop of homatropin or cocaine solution the cornea may be inspected with the ophthalmoscope using a plus 6 or 8 lens in the aperture. The smallest abrasion or foreign body shows up very clearly in this way, and may be removed with the help of an assistant who separates the lids, leaving the operator's hands free for the use of the ophthalmoscope with one and the spud with the other which is manipulated with the cornea in view through the ophthalmoscope. Do not forget that there may be more than one foreign body in the cornea, and that though one is found in the cornea there may be another under the lid.

Foreign bodies, especially rough fragments of metal, may be embedded in the bulbar conjunctiva, and these are frequently more difficult to remove than would appear. One may work without success trying to pick one of these out with a spud or knife. It will appear to be hopelessly entangled in the loose meshes of the conjunctiva. In this case the foreign body should be grasped with a small eye tissue forcep, and cut out with scissors along with the small piece of conjunctiva involved. If too much

conjunctiva is removed the wound may be closed with a fine silk ligature.

Blows directly against the eyeball cause a contusion of the globe which may result in the rupture of the globe necessitating the enucleation of the eye, or a dislocation of the lens or damage to the lens which may later result in traumatic cataract, or a paralysis of the contractor muscle fibres of the iris which produces a dilated pupil without loss of accommodation. Such dilatation of the pupil may last for days or weeks, and recover with good vision.

Lacerations, punctures, and burns of the lids are frequently seen. Punctures and cuts of the lids may also penetrate the globe. Injuries to the lids involving the lacrimal apparatus must be so treated as to preserve the integrity of the puncta and the ducts, that the function of lacrimation is not interfered with. Cuts and wounds of the lids must be treated antiseptically and closed with fine silk, horse hair or fine dermal ligatures, special care being used in those that involve the margin of the lid to secure as perfect approximation as is possible with a view to preventing the occurrence of entropion. I have seen within the past month, a case in which a cut of the upper lid was closed with metal skin clips with very nice approximation. With the edema which followed, the lid margin was inverted and the lower clip was in contact with the cornea. On this account I believe metal skin clips should not be used to close wounds which occur in or near the margin of the lids.

Burns of the lids and eye are treated best by the use of atropin, vaseline, picric acid ointment with local anesthetic or yellow oxide of mercury ointment, using care in the after treatment to prevent adhesions. All foreign bodies must first be removed.

In the edema of the lids, iced compresses are valuable to reduce the swelling. If infection occurs hot moist packs will hasten recovery, together, of course, with proper drainage.

Blows in the vicinity of the orbit may fracture the marginal bones of the orbit. These may be diagnosed by the presence of crepitus, by the deformity present, and by the x-ray. If there is not great

deformity of the parts, treatment to reduce the inflammation is all that is required, while with certain marked displacement of the fragments surgical interference may be necessary to preserve the integrity of the orbit.

If a perforation is found in the anterior part of the eye, though minute and closed, a deep foreign body should be suspected and the case thoroughly examined to eliminate this possibility, or locate the offender if possible. This brings us to the consideration of the penetrating foreign bodies of the eye with retention which is entirely within the field of the ophthalmologist, and the patient may be sent to him if necessary as soon as possible after instilling atropin in the eye and using a moderate quantity of yellow oxide of mercury ointment with the application of a comfortable roller bandage. At the same time I believe the physician should administer an injection of Aolan or other foreign protein, 10 cc. in the case of an adult, deep intramuscularly. This treatment has been used by a great many for the past several years with reports of benefit, and in our own practice the use of foreign protein has seemed to prevent infection and severe reaction in many cases of injured eyes.

After the foreign body has been located it then becomes necessary to choose the route by which its removal shall be attempted. Those lying in the anterior chamber are best removed through a keratome incision at the limbus. If the fragment becomes caught in the iris an iridectomy is necessary to remove it.

Foreign bodies of the lens are frequently well tolerated and may be left alone to be removed later with the cataract which is usually formed. Iron and steel in the lens as well as in other parts of the eye are slowly disintegrated and give rise to the condition known as siderosis. This is the formation of iron oxide from contact with the tissues. Foreign bodies have been reported as having been tolerated within the lens for years without serious results to the globe. We have a case now in which a small piece of brass has been tolerated in the lens for three years. There is no irritability of the eye, and the patient



has so far refused to have the lens removed which has become cataractous.

In the vitreous and retina a foreign body is the most serious problem. There has been some difference of opinion as to the immediate necessity of the removal of a foreign body in the vitreous and posterior segment of the eye. It has been the teaching of most authorities to remove immediately when possible a foreign body in this location.

Albert E. Bulson<sup>3</sup> has recently reported three cases of his own, and cites thirteen similar cases reported in the literature, in which small metallic foreign bodies had been retained for months or years in the posterior segment of the globe without serious results to the eye. He concludes that in a large percentage of cases the patient is as well off if the foreign body is left in the posterior segment of the eye as he would be if it is extracted, particularly if the eye traumatism would be increased by the extraction.

Allport<sup>4</sup> states, "I believe it is wise to remove all intraocular foreign bodies, wherever located, as soon as possible, provided it can be done without almost irretrievable disaster to the eye itself."

Here are two opposite opinions. To the writer it seems that if the foreign body has been located and is magnetizable, and provided the eye is not infected and is reasonably quiet, it is best to remove the foreign body at once. Of course the removal does not insure that the eye will remain quiet. In fact, a great many eyes from which foreign bodies have been apparently successfully removed later become irritable and have to be enucleated.

Most of the foreign bodies removed from the globe, especially those of the posterior segment are necessarily iron and steel which are magnetizable. Those such as copper, brass, glass, stone, etc., which cannot be extracted with the magnet unless tolerated by the eye, mean its loss by enucleation. There is occasionally a non-magnetizable foreign body removed from the posterior segment of the eye, and this should be attempted when there is reason to doubt that a chance exists for its toleration. But those

removed successfully are few, and the chances of so doing are slight.

Perforating wounds to the eyeball are fairly common, in which there is no foreign body retained within the eye. The location of such injuries is of great importance.

James B. Stanford<sup>5</sup> of Memphis, considers that the danger of infection is in direct ratio to the length of time the wound is left open, and believes in immediate operation which consists in a toilet of the wound and the covering of the wound with a flap of conjunctiva.

In the wounds of the cornea especially at or near the limbus there is frequently encountered a prolapse of the iris. This is readily recognized by the irregularity of the pupil and the plug of the iris sticking in the wound. It is usually considered necessary to perform the iridectomy very soon after its inclusion, and this is the time when it should be done. However, I have done an iridectomy on an eye which was becoming more and more irritable, on the seventh day after its inclusion, with an immediate quieting of the irritability of the eye. This patient had been sent in to us five or six days after the injury occurred.

In lacerations of the coats of the eyeball back of the ciliary body there may be so much loss of vitreous that the eye is soft and enucleation necessary. It is so difficult to tell when too much vitreous has been lost that it is best when possible to close the wound with a flap of conjunctiva and give it a chance for recovery. These soft eyes are not painful and a few days time will tell whether or not they merit further tolerance.

Every case having a serious injury to the eye will do better if put to bed and kept quiet with an ice bag in contact with the eye. These are the most difficult cases to keep quiet, because they commonly believe that an injury to an eye should not keep them from being about. I have seen eyes which were quiet and doing nicely while in bed, show a severe reaction with serious complications upon the patient's being allowed to get out of bed and exercise. In the use of ice bags care must be taken to furnish the patient with a light weight bag which can be laid on the eye without too much weight be-

ing brought to bear. It is not infrequently seen that the patient has an ordinary ice bag such as is used in general treatment, lying on an injured eye, with consequent pain and damage to the eye.

There are no injuries which so necessitate prompt and careful treatment as those occurring to the eyes. The prevention of them is of first importance by the wearing of protective glasses and providing guards for dangerous pieces of machinery. A careful examination only will prompt the proper advice and treatment, and prevent the possibility of overlooking serious injuries which may cause the loss of one or both eyes. It is necessary that every physician have a considerable general knowledge of this class of cases, with a fair idea of the prognosis and treatment required.

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#### R "Acidosis"

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Along with gout, diabetes mellitus, diabetes insipidus, rickets, obesity, lipomatosis, hemochromatosis and ochronosis is included acidosis. All classified as diseases of metabolism, in the ninth edition of Principles and Practice of Medicine by Osler and McCrea. These authors state that acidosis is not a disease in itself, but the outcome of the disease which it complicates may depend on the acidosis and its response to treatment may be regarded as an important element in estimating the outcome.

They define acidosis as a decrease in the amount of fixed bases in the blood and other tissues of the body or in other words a relative increase in the acid ions. This involves a decrease in the alkali reserve of the body and hence a disturbance of the acid base equilibrium. This might better be described as a decrease in alkalinity; an actual acid condition not being present.

The free carbon dioxide in the body converts the bases not bound by other acids to bicarbonate and hence the bicarbonate represents the excess of base

remaining after non-volatile acids have been neutralized. It follows that acidosis involves a depletion of the bicarbonate in the blood. A definite acid base equilibrium is essential to life and any marked departure from it results in serious difficulty. This equilibrium is kept at a very constant level and any increase of acid or alkali is automatically guarded against. Under ordinary conditions of diet there is production of acid radicles which are disposed of by oxidation, elimination, excretion and neutralization. The means by which the normal ratio is maintained are: Elimination of carbon dioxide by the lungs, elimination of acid by the kidneys, neutralization of acid by ammonia and intake of fixed bases with the food. It is evident that oxidation plays a large part in the process. In disturbance of the usual acid base relaxations the body endeavors to protect itself by an increase in the normal processes. One important means as increased neutralization of acid by ammonia. The ratio of this to the total nitrogen of the urine, which normally is two to five per cent, may rise to twenty-five or even forty per cent. By an increased respiration rate the effort is made to excrete more carbon dioxide by the lungs. The kidneys may excrete more acid than in normal conditions and the reserve of alkali is used so far as it is available. These means, however, may not be sufficient and it is evident that a decrease in the amount of sodium bicarbonate will result in less carbon dioxide being carried from the tissues and hence an accumulation of it there. From this dyspnoea and air-hunger result. So long as the reduction in the alkali reserve is not marked the condition is not serious, but if this does result many changes follow, such as disturbed oxidation, disturbed renal function, altered nitrogen metabolism, dyspnoea, etc.

The mechanism of this decreased alkalinity is various. In diabetes mellitus there is excessive formation of acetone bodies. In certain of the diarrhoeal diseases it may be that alkali is excreted by the bowels and this probably occurs in cholera. In such cases there is great loss of fluids and under such circumstances the kidneys are unable to in-



crease excretion to meet the emergency. Osler further states that acidosis may occur in many diseases, in some of which it is of slight significance only, in others of extreme gravity. We are now aware that it does occur in most diseases and that its significance is always important. Formerly it was not thought of save in advanced cases of diabetes, but more recently it is a recognized condition in a large per cent of diseases.

Sajous says in his *Analytic Cyclopedia of Practical Medicine* that apart from the acidosis of diabetes there exists a not uncommon form, which is met in patients subject to habitual constipation and other gastro-intestinal disorders, especially gastropnoia and after anesthesia. This he designates as the alimentary form of acidosis, due to the bacterial putrefaction of the contents of the gastro-intestinal canal and probably to betaoxybutyric acid and acetylacetic acid formed when the intestinal fats are split into fatty acid and glycerine. These acids preserve their identity in the alimentary canal, but when they reach the blood and tissues they are finally broken up into acetone and carbon dioxide. It is only when an abnormal amount occurs in the blood that the morbid phenomena of acidosis are awakened. This is probably the result of a gradual reduction of the tissue alkalies until a point is reached when the latter are inadequate for normal metabolism. Under these conditions an insufficient amount of alkali is ultimately available for the neutralization of the acid, the direct cause of poisoning. In carnivorous animals, and also man, the tissues oppose the acid by supplying ammonia and alkaline carbonates to neutralize it, but as fresh doses of acid are added this defensive resource is gradually weakened. Finally the time comes when the alkalinity of the blood is so low that its power of taking up the carbon dioxide formed in the tissues is seriously impaired. The carbon dioxide being retained in the tissues gradually increases therein until symptoms of asphyxia, including cyanosis and coma appear.

A list of diseases and conditions not including diabetes, in which acidosis occurs include, starvation, anesthesia,

pregnancy, diarrhoeal diseases of children, infections and disease of the kidneys and heart.

We are only beginning to realize the importance of diet as a factor in disturbing the normal alkaline balance of the body. All foods, when digested and absorbed leave an ultimate residue which is either alkaline, acid or neutral. Practically all animal foods together with the cereals are acid producing, and when not properly balanced by alkaline producing foods, such as fruits, vegetables, leafy plants, milk, etc., reduce the normal alkalinity and interfere with perfect metabolism. If proper attention were given to the selection of a balanced diet acidosis would be comparatively rare, in fact it is questionable whether it would ever occur. It has been conclusively proved experimentally that the smallest increase of acidity has a markedly deleterious effect on the phagocytic powers of the leucocytes and on nutrition, and it constantly happens in all infections that the hydrogen-ion concentration of the blood is too great, due to the presence of acid products of abnormal metabolism.

It requires no strain of imagination to realize the importance of proper diet. The human body as originally created was a perfect mechanism composed of certain elements that required constant replenishment, which is available only through proper food. Its importance was indicated by the Creator whose first command to man related to diet. The almost universal disregard of balanced diet is the foundation stone of all disease. Only in very recent years has this all important question received scientific consideration. Physicians are not sufficiently awake to its importance and too often give scant consideration to the amount and quality of the food their patients receive.

We are all agreed that a building is only as good as the material used in its construction and that satisfactory repair demands the use of material like that used in the original construction. The same may be said of our bodies which are also buildings. In addition these buildings require constant supplies of certain elements to properly maintain

life and health throughout its allotted span. Neglect to give proper attention to this all important question results sooner or later in disease and premature death.

Only marked acidosis becomes clinically evident, and then the patient complains of headache, drowsiness, weakness and eventually increase of respiratory movements. When this stage is reached acidosis has become an important factor in prognosis. Long before such symptoms are evident the accurate determination of its existence, degree and course are necessary for the special reason that the effectiveness of other therapeutic measures employed will be dependent upon the proper alkaline balance.

Acidosis can be accurately determined by blood examination; this, however, is complicated and requires expensive laboratory equipment. A simple test that is equally reliable consists in the administration of alkaline substances at stated intervals until the urine becomes alkaline in reaction. Bicarbonate of soda is commonly employed although many express a preference for sodium citrate which is more palatable and not so likely to produce diarrhoea. A proprietary preparation known as Alka-Zane is to be preferred when available, for the reasons that it is palatable, a balanced preparation of sodium, potassium, calcium and magnesium salts, in effervescent form. The test is carried out by administering orally one level teaspoonful in a glass of cold water every two hours, until the urine becomes alkaline as indicated when it turns red litmus paper blue. Normally this should occur within an hour after administering the first or second dose. Unless this occurs it may be presumed that the hydrogen-ion concentration of the blood is excessive and alkaline medication should be instituted. It should here be remembered that unless the urine is decidedly alkaline, which is not at all likely, then time must be given for the reaction to take place. It is important to note here that proper and sufficient food will restore the acid-base balance and maintain it at the required level, but unfortunately the patient's digestive and assimilative powers are generally so impaired by the disease condi-

tion that this method of re-establishing and maintaining the acid base balance becomes impracticable. This appears increasingly evident when one considers that even a larger intake of alkalizing foods would be necessary than in health, to take care of the increased demand placed on the alkali supply of the body. It may here be noted that oranges freely eaten will aid materially in rendering the urine alkaline, are not objectionable to most people and are usually easily obtainable. They are especially valuable as a means of maintaining alkaline balance after it has been restored.

To those who take thought it must be plainly evident that physical health demands physical balance, obtainable only through the daily consumption of a well balanced diet. The old saying, that most people dig their graves with their teeth, is too near the truth to be considered a joke.

At a recent public meeting in Philadelphia, E. V. McCollum delivered an address on the subject, "How to keep the human family from starving on a full stomach," and in conclusion remarked that the entire address could be stated in five words as follows: "Drink milk, eat leaf vegetables." This should not be taken to mean elimination of all other food but rather an addition of such food as is now known to contain necessary elements not found in meats, milled cereals, etc.

Foods of today bear very little resemblance to those of our forefathers. Can you imagine Adam and Eve, after ejection from the Garden, seeking a grocery store to procure a steak and loaf of bread for their evening repast? Their only recourse was cereals, vegetables, fruits, etc., in their fresh state as nature prepared them, gathered from the open fields and forests. The foods of today are nearly all prepared for us by processes of refinement that too often remove elements that are essential to health and life.

We were not aware of the existence of such substances as vitamins until the development of deficiency diseases due to their absence. The results of experimental feeding in the absolute eradication of a number of already recognized



deficiency diseases, are convincing beyond peradventure of doubt. As instances I cite the experiment in the Japanese Navy. Beri-beri, a peripheral neuritis resulting in paralysis, had been known from remote times and in 1884 it was demonstrated beyond doubt that in the Japanese Navy it was due to faulty diet.

Under the direction of Admiral Takaki a ship made a cruise of eight months, during which time the incidence of beri-beri among the sailors was carefully noted. Another ship was then manned and sent on a cruise over the same course with an improved dietary furnished the men. The effects were so striking that the diet of the army and navy was improved, with the result that thereafter the disease practically disappeared.

Xerophthalmia or dry eye may be produced readily in experimental animals. Dr. Sansum tells of having prepared a rat for the purpose of demonstrating this disease to a medical clinic. On a Saturday afternoon the animal was suffering from a typical xerophthalmia and was in imminent danger of losing one eye. As the class did not meet until the following Tuesday, a teaspoonful of cream was given, only to find that when Tuesday arrived all symptoms of the disease had disappeared.

Sansum says the term acidosis was used originally to designate a condition in which acetone bodies were found in the urine. It is now used more generally to indicate any condition in which the body is less alkaline than it should be. He subdivides acidosis into two types, the acid ash type and the acetone type. The more common symptoms of the acid ash type are, malaise, lassitude, nausea and later vomiting, loss of appetite, headaches, weakness, sleeplessness, muscle aches, acid mouth, sour stomach, acid urine, acid sweat, sour disposition and blood vessel disease which is responsible for high blood pressure and such complications as partial blindness, heart disease, kidney disease, gangrene and apoplexy.

In as much as the acetone type of acidosis is due mainly to diabetes its consideration would best be left to a study of that disease. Until late years

it alone received consideration, but the remarkable advancement in the knowledge of scientific nutrition has changed our viewpoint and we are beginning to recognize that underneath all pathological processes there is disturbance of balance and that long before diabetes is diagnosable subtle changes are taking place that ultimately result in the appearance of acetone bodies and other serious disorders.

If we give but casual consideration to the foods upon which people in general are now living we are at once aware that in the main they are of the acid ash type and as a result the constant tendency is toward acidosis. Our grains are milled, our fruits and vegetables canned and our meats preserved, thereby often removing the chemical constituents and destroying the vitamins.

Originally all food was consumed in the raw state, today the universal demand is that everything eaten must first be cooked, even though many articles of diet are more palatable and nutritive in the raw than in the cooked state. Many diseases are designated as contagious and the same could be said of health did we but give more thought to the selection and consumption of a well balanced and properly prepared diet. If the same thought and care were used in the selection of the food we consume as is used in the selection of the gas and oil for our automobiles our bodies would function much more perfectly and continuously.

To find urine that gives an alkaline reaction is practically unheard of and an acid reaction is considered normal; however, Sansum states that any urine acid enough to turn blue litmus paper red is too acid and indicates acidosis. If this be true a very large per cent of the world's population has acidosis. I maintain that this is true and for the evident reason heretofore mentioned, the modern dietary.

Acidosis then should be considered a universal symptom that complicates all diseases and demands treatment along with all other remedial agents. It is to be recognized that underneath any and all methods of treatment comes that of restoring balance, a necessity that will

continue as long as the diet contains an excess of acid ash foods. Because of the lack of attention to proper diet we are put to the necessity of employing artificial means to restore the normal alkaline reserve, which is but temporary and continues only so long as the remedies are administered. With the adoption of a well balanced diet persistently used acidosis disappears, but this requires time for its accomplishment and continues only so long as due attention is paid to diet.

In conclusion permit me to call your attention to two cases illustrative of the importance of diet, as related in Goudiss' book on "Eating Vitamines." G——, American, banker, aged 41. Underweight. Guided in his diet by a high priced, conscientious expert, fed exactly the number of calories decreed for him on the basis of the Atwater formulae. Continues to lose weight. V——, Italian laborer, aged 56. Works 8 hours a day, laying sewer pipes. No regimen, daily lunch: 4 thick slices of bread, 4 red-ripe tomatoes. Works well, no fatigue, normal maintenance of weight.

Now there are 1620 calories in a pound of roast beef and 75 in a pound of tomatoes. The caloric content of tomatoes is little more than that of spring water colored red. Evidently something was wrong with the caloric theory. Science wondered and attacked the problem from another angle. It stopped analyzing foods and began to study their effect. If anything approaching the results observed in the case of the middle age Italian laborer is obtainable, then it would seem wise for doctors generally to use these first aid means in the treatment of disease conditions generally.

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### **The Use of Compressed Air As a Therapeutic Agent**

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The treatment of pathological conditions in the human body is today beset with innumerable uncertainties and disappointments due to a great variety of unknown causes but chiefly perhaps to our meager and inadequate knowledge of the proximate composition of protoplasm and the extreme chemical and biophysical

lability of the colloidal complexes which constitute the cell. The diagnosis of disease rests upon a far firmer scientific foundation than does the treatment of abnormal states. Medicine is yet largely an art so far as therapy is concerned and seems destined to remain so for some time to come.

And yet we are making notable headway in rationalizing therapeutic procedures, in translating them as it were from the class of trial and error to the more satisfactory category of cause and effect. Strictly empirical remedial agents are being used less and less each year. The thoughtful modern physician insists on knowing why he gives a remedy even though he has knowledge, from clinical experience, that certain results may be obtained from its use. To be sure the answers he receives to these scientific inquiries are vague and unsatisfactory in most instances but definite progress is being made nevertheless along these lines.

One conspicuous advance in therapeutic practice in recent years has been a shifting of emphasis on the relative importance of vegetable and mineral drugs in modifying pathological processes. While drugs have by no means been abandoned the polyvalent prescription with its many chief ingredients, adjuvants and correctives, so popular twenty years ago, has all but disappeared. A few doses of a simple remedy usually suffices. In the place of an almost exclusive drug regimen, rest, pure air, proper food, physical, radiant, and occupational therapy have come to play a major part in the successful treatment of disease. These procedures have come to be considered rational remedial agents, and in this sense scientific, largely because their employment seems more normal to the call and its environment. Measures of this sort are preferred because they introduce little or nothing that is foreign to the cells' protoplasm and therefore, if effective at all, may logically be assumed to recondition the diseased cell in a gentler and more natural manner.

The use of oxygen in the treatment of disease is increasing with each year that goes by. This element can scarcely be



called a drug in the ordinary meaning of the term and yet we know that in pathological states it does become a powerful therapeutic agent. In all conditions for example where an anoxemia can be shown to exist the use of oxygen rests upon strictly scientific considerations. It can be experimentally shown that by increasing the tensions of oxygen in the alveolar air, anoxemia is relieved. The oxygen saturation of the hemoglobin of the arterial blood is increased and may, in certain instances, reach a saturation value about three per cent above that ordinarily found in the strictly normal individual. The value of oxygen in a variety of other empirically determined conditions seems also inferentially justifiable because of the intimate and important role which oxygen plays in cellular metabolism. The probabilities are, that, more than any other element, oxygen tends by the intracellular oxidizations which it makes possible, not only to keep the normal cell in a healthy condition but also to restore this condition when the cell has become diseased.

It is an unfortunate fact that a great many members of the profession have come to think of compressed air, either as an old, useless, ineffective discarded therapeutic measure, or as something entirely new which needs clinical and experimental verification and demonstration before it can be accepted or used in an orthodox way in the treatment of disease. To them the connection between compressed air therapy and oxygen therapy, or the use of oxygen enriched air, seems very remote, when as a matter of fact the two procedures are therapeutically identical. Hundreds of articles have appeared in the most reputable of our medical journals during the past decade, discussing the benefits of oxygen and oxygen enriched air in a large variety of diseased conditions. Reputable physicians are today using oxygen in a variety of ways in the treatment of disease. And yet I doubt if there is a single result recorded in these articles or obtained by these men, excepting perhaps, those referring to injection of oxygen, which cannot be duplicated in compressed air properly used. The experimental evidence which justifies the use

of oxygen in disease gives like sanction to the use of compressed air. They are both forms of oxygen therapy; the latter is as scientifically legitimate as the former. Therapeutically they are related to each other as quinine capsules are to quinine pills.

The use of compressed air in the treatment of disease dates back to the 17th century. The historical aspects of the subject are very interesting but not particularly important or instructive. The literature is surprisingly large but the observations recorded are vague, uncontrolled, and contradictory. We know today that the data is of comparatively little value because, in the first place, the pressures used were too low to produce therapeutic effects and, in the second place, the time given over to the treatment was too short to be effective. Barach has recently come to the conclusion that oxygen concentrations of less than thirty per cent of an atmosphere are ineffective for therapeutic purposes while concentrations of from forty to sixty per cent are of decided value. The older experimenters used oxygen pressures too low to be therapeutically useful. This explains in large measure the reasons for their failures to put compressed air therapy on a firm footing and to establish the use of compressed air as a valuable therapeutic agent. If anti-toxin or insulin were today restricted to single unit doses instead of given as they now are they, too, would be discarded as worthless in a short time in spite of the tremendous intrinsic values which they possess. The compressed air therapy of the past was bound to fail as surely as will ineffective doses of any other valuable remedy.

From a theoretical point of view oxygen therapy, in any of its forms, resolves itself almost entirely into consideration of the partial pressures of oxygen developed in the air or oxygen mixtures used. It may therefore be pertinent in this connection to review a few of the elementary principles of the mechanics of air, and to recall the ways in which oxygen is carried in blood. Ordinary air is a mixture of several gases chiefly oxygen and nitrogen. The sum of the partial pressures of all the atmospheric gases

total 760 mm. of mercury at sea level. The partial pressure of oxygen in air is  $\frac{1}{5}$  of 760 mm. or 152 mm. of mercury. In the alveoli of the lung, where the carbon dioxide content is much higher than in ordinary air, the partial pressure or tension of the oxygen is reduced to about 100 mm. of mercury. At 100 mm. tension of oxygen, in the alveoli of the lung, the hemoglobin of the blood of a healthy individual, when breathing is normal, is saturated to the extent of about 96 per cent. From 18 to 22 cc. of oxygen, measured under standard conditions, are thus stored as oxyhemoglobin in every 100 cc. of blood, ready to be "retailed" to the tissues, through solution in the blood plasma, as needed. In addition to the oxygen contained as oxyhemoglobin in the red blood corpuscles, blood plasma holds, at ordinary pressures, about .3 per cent of oxygen in physical solution. The amount of oxygen held as oxyhemoglobin, is limited by the saturation capacity of the hemoglobin present in the blood. The amount of oxygen held in physical solution depends, in the normal individual, directly upon the tension of oxygen in the alveolar air. It is the oxygen in physical solution in the plasma which first diffuses from the blood into the tissues. The diffusion pressure of oxygen depends therefore, in the first instance, upon the tension or "head" of oxygen in the plasma.

The tension of oxygen in the blood may be effectively increased in two ways. It is increased either by allowing an individual to breathe oxygen enriched air, at ordinary atmospheric pressure, or by compressing ordinary air, without enriching it with oxygen. The net effect in each instance is an increase in the partial pressure of oxygen. The therapeutic effects of oxygen lie, so far as we know today, solely in the increased partial pressure of oxygen available in the air of the oxygen enriched mixtures used. By compressing air the partial pressure of oxygen is increased and ordinary air is thereby made therapeutically identical with oxygen enriched air. Compressed air properly used will then do anything and everything which oxygen enriched air will do. When the oxygen tensions are identical the therapeutic in-

dications must be the same. Ordinary air enriched with oxygen to 60 per cent of an atmosphere has an oxygen tension of 456 mm. of mercury. This tension of oxygen is equalled by compressing air to three atmospheres absolute (30 pounds gauge).

There are many reasons which point to the superior effectiveness of giving oxygen by compressing ordinary air rather than by enriching it with pure oxygen. In the first place, a patient in compressed air is at all times fully immersed in the air which he breathes. Every breath he takes helps effectively to bring the blood and tissues to higher saturation levels of oxygen. Compressed air, moreover, remains at all times diluted with nitrogen in exactly the same proportion as is found in ordinary air. By giving compressed air in a chamber combersome face masks and inhaling devices are eliminated. The air by constant renewal, is kept fresh at all times, thus doing away with high concentrations of carbon dioxide and the rebreathing of "stale" air. By properly cooling compressed air, and removing moisture by refrigeration, an "artificial climate" is created which is extremely attractive and relaxing to the patient. The cost of producing compressed air for therapeutic purposes may be somewhat higher than that of producing oxygen enriched air, but the stimulating physical and psychic effects, produced by regulating the temperature and amount of moisture, in addition to increasing the oxygen tension, is well worth the extra expense. If there are any benefits to be derived from a change of climate, in so far as variations in such purely physical factors as temperature and humidity are concerned, this may be effectively and delightfully realized, as a by-product, in compressed air. These physical factors may become of considerable importance when treatments are taken extending over periods of five or more days as seems to be customary in treating chronic diseases in the oxygen chambers at Stoke on Trent and other places in England.

The fact that compressed air therapy is an effective and real form of oxygen therapy is born out by other than theoretical considerations. If, for example,



a normal individual is given oxygen to breathe for a short period of time it is noticed that the pulse decreases in frequency, the respiration becomes slower and deeper, the breath can, after a time, be held longer. The saturation of the hemoglobin of the arterial blood increases from 96 per cent to about 99 per cent. The oxygen in physical solution is increased according to Henry's law and by this means the increased diffusion pressure raises the oxygen tension of the blood and tissues. All of these effects are noted in precisely the same manner in individuals breathing compressed air.

Hill and Flack have shown that normal men can perform physical exercise with less fatigue and dyspnea when oxygen is added to the inspired air. Briggs has demonstrated that this is especially true when the individual is unfit although oxygen enriched air assists even the normal man in an overload. The experience of engineers and physicians in charge of men working in caissons indicates that physical labor is carried on with greater efficiency and less fatigue in compressed air than in ordinary air. Haldane says, "With a fresh supply of air hard exertion is actually easier to the diver at some depth than near the surface on account of the higher oxygen pressures."

In the pathological individual there is found the same relief of symptoms in compressed air that is noted in individuals breathing oxygen enriched air. Oxygen therapy is especially indicated in all conditions in which the saturation of the arterial blood is below normal. Haldane states that: "Anoxemia is a common condition among ordinary patients and well worth taking early measures to prevent. Even a slight lowering of the arterial oxygen saturation has a serious effect on the individual." Shallow breathing produces in the normal individual an anoxemia even when the alveolar air is normal in composition.

The most spectacular effects of giving oxygen is noted in the relief of cyanosis and air hunger in cases of arterial anoxemia due to obstructive exudates in the lung. These cases are as promptly relieved in compressed air as in oxygen en-

riched air. The relief of localized edema, the healing of chronic indolent ulcers, the improvement of circulation in stumps of amputated limbs, reported by English investigators as a result of treatment by oxygen enriched air can all be easily duplicated in compressed air. Whitridge Davies in a recent lecture on oxygen therapy to the British Medical Society asserts that not only can the arterial form of anoxemia be relieved by oxygen but also the stagnant and anemic forms can be overcome more or less completely. In the anemic and stagnant types of anoxemia the amount of oxygen in simple solution must be increased since the hemoglobin is holding all it can. This can only be done effectively by increasing the partial pressure of the air in the lungs.

Oxygen and oxygen enriched air have been used in a great many diseased conditions. Competent investigators have published data in our best Medical Journals on the successful use of oxygen in more than a score of well known diseases. Dr. John H. Evans has within the past five months presented to the Buffalo Academy of Medicine a most interesting and valuable report concerning the use of oxygen in a number of pathological conditions. Ever since Lorrain Smith, some thirty years ago, first called attention to the toxic effects of high tensions of oxygen in normal animals it has been considered an established fact that oxygen in concentrations exceeding sixty to seventy per cent could not be used as a therapeutic agent for man for any considerable length of time without producing severe irritation of the pulmonary epithelium leading to pulmonary edema and fatal pneumonia. Evans has found that oxygen concentrations of one hundred per cent are well tolerated by patients for two weeks or more whenever an anoxemia actually exists. Not only is pulmonary edema not produced under these conditions but it is actually relieved if present. Dr. Evans administered pure oxygen continuously for five and a half days to a twelve-year-old girl suffering from meningitis. There was no lung pathology. At no times, says Dr. Evans, was there any edema, rales, or cough indicating that oxygen was acting as an irritant. If these results are

substantiated it is apparent that oxygen in the anoxemic patient differs in its effects from what it does in the healthy man or animal. This, Dr. Evans points out, is precisely what happens when ordinary physiological salt solution is administered subcutaneously. In the dehydrated patient it is quickly absorbed and well tolerated while in the normal individual it is absorbed very slowly and seems to act as an irritant.

Fischer and Anderson have recently shown that oxygen concentrations of sixty per cent of an atmosphere destroys carcinomatous tissue in vitro and that oxygen concentrations of 1.6 atmospheres will destroy carcinomatous tissue in vivo. Marsh has reported within the year that mice thrive and breed after twelve months of exposure to thirty pounds of compressed air (three atmospheres absolute). The lives of carcinomatous strains are prolonged, in compressed air, spontaneous tumor incidence lags considerably behind that of controls in air at ordinary pressures, and tumor formations occur much later in life. The work of these investigators opens a new and very important field of endeavor in oxygen therapy.

The large number of conditions already treated by oxygen and oxygen enriched air points strongly to the universal nature of this substance as a therapeutic agent. The greatest drawback to the effective use of oxygen therapy at the present time is found in the ineffective manner in which oxygen is ordinarily administered. Face masks, inhalation tubes and oxygen tents are all more or less cumbersome, and imperfect devices. Barach found the tube and funnel method practically useless in administering oxygen. The nasal catheter gave oxygen concentrations varying from twenty-five to thirty-five per cent in the nasopharyngeal air. In none of the cases in which the nasal catheter was tried did the oxygen saturation of the arterial blood reach a normal level.

The same author administered forty to sixty per cent oxygen to a number of patients by means of the bed tent. While the arterial oxygen concentration was increased in each case, in only two out of sixteen was the oxygen concentration

brought to the normal value. I have repeatedly filled considerable portions of both lungs of rabbits, anesthetized with chloretone, with a ten per cent mucilage of acacia. This colloid is non-absorbable by the lung epithelium and in from thirty to ninety minutes produces a severe arterial anoxemia with an oxygen saturation of forty per cent or less. When animals rendered thus anoxemic are put into compressed air at a pressure of twenty pounds above that of the atmosphere the anoxemia is invariably relieved in from thirty to sixty minutes, the arterial saturation becomes normal or increases to within a few per cent of this value and remains so as long as the animal is subjected to the higher oxygen tension. Very often the arterial oxygen saturation becomes several per cent higher than the normal value. This experiment demonstrates effectively the efficiency of oxygen administered in the form of compressed air in relieving an arterial anoxemia. Even the oxygen chamber which is admittedly the best method of administering oxygen enriched air at the present time does not furnish an atmosphere as effectively conditioned for the patients' comfort, in hot as well as in cold weather, as does the compressed air chamber.

The numerous results already published by many investigators amply justifies the use of oxygen therapy, in any of its forms, in the treatment of disease without further preliminary report or publication. We already have more premature data in medical literature than is useful. It seems to me that with the evidence now at hand physicians are justified in using oxygen, in the form of compressed air, in treating any condition in which oxygen therapy can be shown to be reasonably indicated or in which preliminary experimental evidence holds out promise of success.

—R—

### TUBERCULOSIS ABSTRACTS

Light is a necessity to the life and well being of the cell. Sunlight contains, in addition to heat and light, other forms of radiant energy. Heliotherapy was practiced by the ancients. Hippocrates used it in the temple of Aesculapius;



Aristotle noted the effect of sunlight in producing green coloring in vegetable matter; Cicero describes the solarium which wealthy Roman citizens had constructed at their country villas; Celsus and Galen preached the salubrious effects of the sun. In 1779, Bertrand published his essay on "The Influence of Light on Living Organisms." In 1815, Loebel advised general, rather than local, insolation in cases of pulmonary tuberculosis, except in cases of hemoptysis. In the middle of the 18th century, Rickli established a clinic at Veldes, Austria, where patients were treated by insolation and fresh air with astonishing results. The discovery of the electric arc made artificial heliotherapy possible. Professor Finsen was the first scientist to practice actinotherapy by means of artificially produced rays and, in 1893, published his results of the treatment of tuberculosis (especially of the skin) by rays emitted from a carbon arc lamp, the "Finsen Light." In 1903, Rollier opened his first clinic for bone and joint diseases at Leysin, with brilliant results. The oldest of therapeutic agents has thus become one of the most modern.

### Heliotherapy

Although Rollier lays stress on the importance of his Alpine environment, it is possible to offer patients the advantage of heliotherapy almost anywhere. Certain conditions, such as clouds, inclement weather, high winds and moist atmosphere, must be met in low altitudes. To meet these contingencies, different forms of artificial light, such as the various forms of quartz-mercury and arc-lamps are used.

Rollier ascribes the beneficial therapeutic action of the sun's rays chiefly to the ultra-violet rays of the spectrum. He and his followers measure success in the individual case by the degree of the pigmentation of the skin. Although the sun's rays produce degrees of pigmentation which vary within wide limits according to the characteristics of the individual's skin, whether the benefits to be derived from light treatment in tuberculosis and other diseases stands in a definite relationship to the degree of

pigmentation, is quite another matter. While pigmentation is an undeniable response of the body to treatment, it is perhaps not to be relied upon as an accurate gauge of the patient's progress toward recovery. For this, we must still look to the condition of the affected part itself, as revealed by careful examination and, in the case of bones and joints, to roentgen-ray appearance. Perhaps the alterations of the patient's blood-picture is the most reliable measure of the defense reaction. The quartz-mercury-



The Sun Bath

vapor lamps produce ultra-violet rays in greater quantity than the sun itself, and in these lamps the heat or infra-red rays are almost entirely lacking. By the use of these lamps, on repeated exposure, an erythema may be obtained, which becomes continuous, and the skin becomes darker than before. It is spoken of frequently as pigmentation; but it is not the deep brown which the sun's rays produce in most skins. In patients who have acquired a deep tanning from exposure to the sun, it is not possible by means of the quartz lamp to prevent this pigmentation from fading away, nor is it possible in this manner to maintain the general improvement obtained from exposures to the sun. Ultra-violet rays alone are not a fair substitute for the rays of the sun in surgical tuberculosis.

It is not possible to show, at present, that ultra-violet rays of artificial production have marked curative value in the treatment of tuberculosis of bones and joints. The action of the quartz lamp is superficial, and it is an unsatisfactory substitute for sunlight. The im-

pression that the contrary is true as a result of which the more special orthopedic management of these cases is being omitted, is unfortunate and a calamity for many a patient.

The rejection of the quartz lamp as a satisfactory substitute for the sun is not to be accepted as a gesture of despair. Kisch, of Berlin, believes that the most important element of the solar light is to be found in the heat rays in the red and infra-red portions of the spectrum. He is convinced that their activity stands in direct relationship to the surface temperature produced, and that this must approximate that which is produced by the sun itself. However, it does not seem justifiable to ascribe the virtues of sunlight altogether to either ultra-violet rays or to heat, nor is either an acceptable or practical substitute.

Heliotherapy may be a marvelous addition to our resources, but it works no miracles; it brings to our aid no biological resources of unprecedented character; it produces no new cartilage; it makes the process of cicatrization no less necessary than hitherto. At the same time, by its beneficial action, cicatrization is made more sure and rapid. The wise application of such a well-established surgical procedure as immobilization through fixation is just as important as ever. With all its limitations, heliotherapy is a great addition to our resources, particularly in the tuberculous bone diseases of children.—Heliotherapy at Low Altitudes, A. H. Frieberg, Jour. of A. M. A., March 13, 1926, lxxxvi, 731.

### Technique of the Sun Bath

After preliminary hardening and observation, if the patient's condition warrants it, the sun bath is begun. This is given with the patient in the recumbent position and not sooner than one hour, or better, two hours after the meal, and should be discontinued at least one-half hour to one hour before the meal.

The first day, the feet are exposed for five minutes, then covered ten or fifteen minutes and another exposure for five minutes is given; covered again for ten, and exposed again for five. This is done front and back.

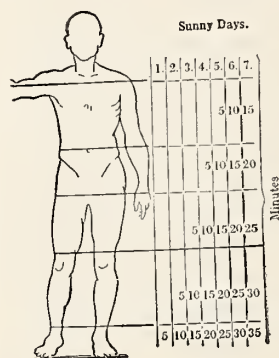
The second day, the feet are exposed

for ten minutes and the knees for five; covered and uncovered three times front and back.

The third day, the feet are exposed fifteen minutes, the knees for ten minutes and the thighs for five; covered and uncovered three times, front and back.

The fourth day, five minutes' exposure is added to the feet, knees, and thighs, and the abdomen is given five minutes.

The fifth day, the previously exposed parts are given an additional five min-



Diagrammatic Course of Sun Cure as Suggested by Rollier

utes' exposure and the chest is given five for the first time.

Each day, a five-minute increase is given until the whole body is able to tolerate three or four hours daily of sun cure without burning. The progressive exposure is carried on to ascertain the patient's tolerance and to obtain pigmentation without burning. If, for any reason, the sun cure has to be interrupted during the preliminary exposure, the time of the next bath should be reduced to an earlier stage, the stage depending on the degree of interference.

Great care should be taken during the early exposures to avoid burning and to watch at all times for unfavorable symptoms, such as a rapid pulse, rise of temperature, headache, nausea, fatigue, dizziness, or other constitutional disturbance, which might indicate an intolerance to the sun or an exacerbation of the disease.

The baths are always given the same way without regard to the location of the lesion. The lesions should be kept covered until the patient has been able to take one or two hours of cure without any reaction. When the lesion is ex-



posed, it should be started at five minutes the first day, with five minute increases each day thereafter.

In the case of feeble patients or of those who do not tan well, or in cases where there is considerable fever, it may be necessary to reduce the time of daily exposure and to give only two or three minute increases daily. If any dermatitis or burning occurs, the treatment should be discontinued for two or three days. Sometimes, it is necessary to wait for a week or ten days.—Heliotherapy in Tuberculosis, C. L. Hyde, M. D., Ohio State Med. Jour., Dec. 1, 1925.

“A child with a tuberculous hip might be made a chronic invalid if light alone is given; whereas, if he is placed in proper orthopedic rest, with good food, fresh air and proper light treatment, usually he can be cured, sometimes with full function of the joint restored.”

—R—

## UNIVERSITY OF KANSAS CLINICS

### The Treatment of Nephritis

DR. D. R. BLACK

The treatment of a given disease presupposes a careful consideration of the pathogenesis of the diseased organ, the fundamental physiology of the organ, and the pathological processes which have varied the normal physiology. In no other manner can rational therapy be instituted.

Let us then in our discussion of the treatment of nephritis at once establish a workable classification of nephritis, and have a common understanding of the function and physiology of the kidney and the manner in which certain types of inflammation and degeneration modify the normal function. Possibly the least confusing, and probably the most satisfactory classification, is Moschowitz's modification of the classification of Volhard and Fahr:

#### I. Nephrosis

- (a) Chronic parenchymatous nephritis (Degenerative)
- (b) Lipoid kidney
- (c) Amyloid kidney
- (d) Subacute glomerulonephritis
- (e) Unknown origin

#### II. Glomerulonephritis

- (a) Acute
- (b) Subacute
- (c) Chronic

#### III. Arteriocapillary fibrosis

- (a) With hypertension
- (b) Without hypertension

It is quite probable that the term nephrosis has no pathological foundation, and, is therefore, dependent upon the type of degenerative lesion under consideration. Glomerulonephritis is a definite clinical entity and may be experimentally produced as shown by Duvall and Hubbard of Tulane University by certain endotoxins of scarlatinal streptococci presumably circulating in excess of the immune bodies established by the organism against these specific invaders. Typical histological lesions of glomerulonephritis in its various stages have been produced and studied.

It is, of course, known that the so-called embolic or focal nephritis may be produced at times by living organisms. Evidence has also been advanced to show the sequential relation of nephritis and arteriosclerosis to hypertension. The renal and extra-renal types of arteriosclerosis seen are the same and represent contemporaneous reactions to the same insult; namely, hypertension. The term arteriocapillary fibrosis is used to cover these pathological processes, in fact, recent work seems to indicate that chronic glomerulonephritis also represents a generalized capillary disease in which the renal lesion is the localized expression and perhaps the most predominating one, the hypertension being the direct result of the increased resistance due to capillary disease and that the sequential relation of hypertension to nephritis is only specious. Major feels that methyl guanidine, one of the end products of nitrogen metabolism, is responsible to a certain extent for hypertension, and that its long continued retention in so-called cases of essential hypertension eventually augments the nephritis, which always, sooner or later, develops in the cases who outlive such catastrophies as heart failure or cerebral hemorrhage. His experimental evidence is interesting and convincing, at least in so far as the etiology of the experimental hyperten-

sion is concerned, and his method of treatment by means of certain fractions of liver have produced remarkable experimental results and has been beneficial in seventy per cent of the cases of hypertension in which I have used the preparation.

The work of Starling and recently of Richards indicates that Cushing's modern therapy of kidney function furnishes the most satisfactory working basis for the physiology of the kidney. The essentials of the modern therapy with certain modifications of the above named authors are as follows:

The essentials of the process of urine production are physical, simply a process of filtration from the blood stream through Bowman's capsule and that the intra-capsular filtrate represents a de-proteinized blood filtrate with the various salts and waste products in exactly the same concentration as in the blood. Reabsorption of certain salts occurs within the convoluted tubules in such a manner that under normal conditions the waste products of nitrogen metabolism are carried through intact and the salts and substances necessary to body economy are reabsorbed into the circulation in physiological amounts. The cells of the convoluted tubules are supposed to possess this selective activity. The process of filtration, of course, obeys the natural laws of all filters.

1. The density of the filter (e. g., the integrity of the glomeruli) and the pressure (blood pressure) being constant the rate of filtration will depend upon the character of the substance to be filtered.

2. The density of the filter and the substance to be filtered being constant the rate of filtration will depend upon the pressure.

3. The pressure and character of the substance to be filtered being constant the rate will depend upon the density of the filter.

Certain definite experimental data concerning the action of diuretics has been brought forward which deals primarily with rate and flow through the kidney and has as its fundamental basis the difference in caliber of the afferent and efferent vessels to the glomeruli, the efferent being smaller.

Adrenalin in small amounts constricts both vessels but not sufficiently to allow the factor of resistance in the efferent vessel to influence the increased pressure brought about by the same agent, consequently diuresis results. If larger doses of adrenalin are given the factor of resistance outweighs the factor of increased pressure and the opposite effect, anuria, is produced. The action of the so-called vasodilators work along the same lines.

As practical considerations one must keep in mind the fact that only about  $\frac{1}{3}$  of the 2,000,000 glomeruli function normally at a given time, and that from a standpoint of kidney function we should presuppose a very marked damage to the kidney before the ordinary kidney function tests would register. Many kidney function tests are designed to represent abnormality in certain functioning parts of the kidney. I think we will be safe in assuming those tests which have to do with the ability of the kidney to concentrate solids and those that show us the ability of the kidney to excrete waste products are most trustworthy. I usually rely upon the Mosen-thal two hour test for specific gravity as a test for the ability to concentrate; the phenolsulphonephthalein test for glomerular function; and blood nitrogen level as a measure of the ability of the kidney to eliminate waste products; the examination of the urine substantiating these things, throwing light on the type of infective process going on in the kidney.

#### TREATMENT

One must realize in the beginning that the fundamental principle of treatment is based on the fact that a certain portion of the functioning kidney is dead and incapable of recovery, and that treatment must be directed along two lines:

1. To conserve the integrity of the remaining portion.

2. To prevent, if possible, the continuation of the processes which have originally damaged the kidney.

The one, therefore, embodying measures purely physiological to alleviate undue strain on the over-burdened remaining normal portion, but at the same time



to maintain as much normal cellular activity as is possible. This is usually done by diet, rest, diuretics, alkalies and acids.

The second, of course, deals with purely extra-renal facts—eradication of infections, chemical poisons, attention to circulatory influences and arteriosclerosis. Time will not permit a consideration of all the methods in use for treatment, and I would like to confine my remarks primarily to the alkaline method of treatment being used in Guy's Hospital. Certain substances known to be irritating to kidney epithelium should of course be omitted; for example, condiments, spices, excess of salt, and, inasmuch as Newburg has demonstrated the injurious effects of prolonged protein feeding upon kidney epithelium, low protein diets should be used in all true nephritis and sclerotic lesions regardless of the blood nitrogen level. A possible exception is made in true nephrosis, a condition in which diets high in protein appear to have some merit.

#### THE ALKALINE TREATMENT

Alkali in the form of a solution containing equal parts of potassium citrate, potassium bicarbonate, sodii citrate and sodium bicarbonate, made up with peppermint water is given in doses aggregating about one grain to every 1.5 pounds of body weight. This mixture is given until the plasma carbonate is normal, and is maintained only in sufficient dosage to maintain a normal alkaline reserve. In severe cases, with anuria, it is well to utilize the thirst hunger method of Volherd in connection; namely, 600 c.c. of fluids daily, including fifty per cent as orange juice, for four days, or until the flow of urine is re-established.

It is a proven fact that cellular activity is associated with an increased hydrogen ion concentration and that the result of increased cellular activity or stimulation in the kidney is associated with diuresis. It has been shown by Stieglitz and Nussim that excessive alkali therapy produces renal injury and actively increases the acid bodies in the renal epithelium to a point of functional obstruction by swelling and edema. It has also been shown that rational alkaline therapy, keeping the hydrogen ion concentration

of the blood within normal limits increases the efficiency of the kidney. We have here a paradoxical phenomena; namely, diuresis may be produced by either acids or alkalies, the practical point apparently being to find and maintain the proper reaction within the kidney epithelium for its maximum. Most of the acid and salts now in use, and certainly the mineral salts, are adapted more closely to circulatory conditions, and their real efficiency depends upon their ability to relieve cardiac edema. Cases of injury by alkalosis are rare and few of us have ever seen a case of alkaline tetany. The idea seems somewhat hypothetical; provided, the conditions of treatment outlined above are followed.

It is common knowledge that in all cases of nephritis there is a decrease of the plasma carbonate and that in most cases there is an increase in alkaline tolerance. From a practical standpoint it is therefore essential to know the plasma carbonate while treating a case of nephritis, because in no other manner can we gauge the dose of alkalies to be given; also, to safeguard the possibility of producing renal injury or alkalosis. In general it may be said that cases of nephritis with edema and cases in which the urinary volume is below normal will derive marked benefit by giving alkalies in amounts sufficient to produce normal blood carbonate. In favorable cases a marked diuresis and subsidence of edema occur when this point has been reached. Naturally the best results are to be expected in chronic parenchymatous nephritis and subacute glomerulonephritis. Alkalies have little or no influence on vascular or interstitial nephritis. As a matter of fact no therapeutic agents have much influence on these cases, except possibly iodides, low protein, low salt, non-irritating diets and rest. Acute nephritis presents some difficult aspects. In the early stages the plasma carbonate is normal. It is here that the above mentioned hunger thirst treatment is valuable in connection with sweating, absolute rest, very small doses of digitalis, and perhaps in obstinate cases, veniotomy, and occasionally lumbar puncture. Under two conditions in acute nephritis are alkalies indicated:

1. In absolute suppression of urine.
2. After the case has developed into a subacute nephritis with evidence of some parenchymatous change.

In any case of non-obstructive anuria it is advisable to use alkalies until flow is re-established regardless of condition of blood.

Cases of pure lipoid nephrosis (Epstein's disease) are uncommon. They are characterized by weakness, anemia, edema, normal blood pressure, slight, if any, elevation in blood nitrogen, marked albuminuria and cylinduria, low blood protein, and a reversal of the serum globulin to serum albumin ratio, and increased blood cholesterol. Epstein's idea of the production of edema in these cases has been that the loss of blood protein as albumin in the urine decreases the osmotic pressure of the blood rendering it less than that of the tissues, consequently the current of fluid flow would be from blood to tissues. He advises for this reason high protein diets, 2 to 3 grams per kilo body weight. In severe cases blood transfusion is used and he has reported excellent results by this treatment.

Loeb adheres more closely to Widal's original idea of chloride retention and offers a hypothetical, and perhaps practical explanation of chloride retention. He assumes that in the process of degeneration occurring in the tubules certain tonic protein substances are liberated into the blood stream which produce a fixation of chlorides within the tissues making, as under the terms of Epstein's theory, the current of fluid flow from the blood stream to the tissues. Evidence is accumulating from therapeutic reports in the literature in treatment of nephrosis with high protein diets to support Epstein's hypothesis, although I feel the question is still debatable.

I would like to emphasize a point of practical importance in connection with the nephritis of advanced arteriosclerosis and hypertension, namely, the influence of passive congestion in the kidney due to cardiac failure. Frequently the albuminuria of such cases will clear up as if by magic by rest and small doses of digitalis. This calls to mind an anecdote in the life of the late Sir William

Osler. He once said "that the most embarrassing moment of his professional life was when he was confronted by an old patient in good health whom he had told twenty years ago that he would die in six months of Bright's disease because he had a high blood pressure and albumin in his urine."

—R—

### Irradiation and the Blood

The enthusiasms that have been aroused by the demonstrable physiologic potency of irradiation with ultraviolet rays generated in various ways call for restraint before they are permitted to promote therapeutic procedures that may presently be discovered to be ill advised. Not long ago it was shown that the exposure of dogs to carbon arc radiation may give rise to variable results with respect to the changes in the content of erythrocytes in the blood. Depending on the dosage, increases and decreases were noted. A continuation of this work shows that changes in the plasma volume also may take place. The investigators believe that erythrocytes may actually be destroyed by excessive irradiation with massive exposures. Our uncertain knowledge in regard to the effects of irradiation should serve as a warning against undue ventures that may actually border on quackery, until further explicit knowledge is available. (J.A.M.A., October 6, '28.)

—R—

### Liver Treatment in Spine

From reports it appears that anemia of sprue in which there is a high color index and fewer than 2,000,000 erythrocytes can be expected to respond to the administration of Minot's liver fraction (Liver Extract No. 343, N.N.R.) with a shower of reticulocytes, unless the bone marrow is hypoplastic. Clinical cure, apparently, follows, but the type of pernicious anemia persists for at least two months after liver extract has been administered. A recent report of a case of sprue treated with Liver Extract No. 343, N.N.R. refers to a patient who was admitted to the hospital in a moribund condition and who has apparently recovered completely. (J.A.M.A., October 6, '28.)



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of the

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### ETHICAL ADVERTISING

The time is rapidly approaching when newspapers will be governed in the acceptance of advertising matter by the same ethical principles that now govern the state medical journals, the same ethical principles, in fact, that have governed the members of the medical profession in their relations with the people and with each other for at least three quarters of a century. When the newspaper publishers have accepted and digested these principles they will understand why regular physicians have not extensively used their advertising space.

The outstanding features of ethical advertising are that it shall contain no misrepresentations, that it shall contain no exaggerated or unwarranted claims, and nothing that may be unfair to others in the same line of business.

Merchants usually advertise the things they have to sell. Professional men have nothing to sell but their services. In what way can a physician or surgeon advertise his services that will meet these requirements and still assure sufficient returns

to justify the expenditure? A doctor's personal equipment may be evidence of his ability to render excellent service, but to advertise it would not only provoke ridicule for his egotism and lack of modesty but would raise the suspicion of exaggerated or unwarranted claims. One's office equipment may be regarded as evidence of ability to render satisfactory service, but this sort of equipment is merely a matter of cash or credit and a great many doctors have accumulated thousands of dollars worth of instruments of precision and therapeutic appliances and apparatus that they have neither time nor occasion to use. To advertise it would raise the question of misrepresentation.

According to the higher standard of advertising ethics which will ultimately be the common standard there is no way in which a doctor can advertise himself in the newspapers with any prospect of satisfactory returns on his investment.

The medical profession, however, has something to sell to the people that it can advertise and should advertise. The American Medical Association, several of the state societies and various other medical organizations have been conducting publicity campaigns of various kinds for the purpose of selling scientific medicine to the people. In these campaigns, newspaper space is used quite freely, whenever the material is regarded in the light of news or the paper shows a friendly interest in the advancement of health measures. Except in a few states very little money has been spent in the purchase of advertising space. The large dailies are sufficiently independent that their editors may ignore, to a considerable extent at least, the particular interests of their advertisers. The smaller papers, however, especially the county weeklies, must carefully nurse their advertising patrons.

Many of the editors of these are patrons of regular doctors and friendly to scientific medicine, but they receive considerable revenue from the advertisement of quacks and patent medicines. The amount of advertising the regular doctors do would not buy the ink to print the paper.

The influence of these small papers is particularly worth having, especially in our campaign for better legislation and also in our educational campaign. While an individual physician cannot ethically or profitably advertise himself, the medical profession of a nation or a state or the members of a county society can advertise scientific medicine. They can ethically and profitably use advertising space to tell the people what scientific medicine has done for them, how it has accomplished the eradication of nearly all contagious diseases; to tell them about some of the procedures by which theories of disease have been established as facts or have been replaced by facts, and how scientific methods of treatment have been discovered.

When the story of the scientific procedures by which you have been convinced has been retold in plain language that the people can understand they also will be convinced. Advertisements of this kind will not profit one man only but the benefits will accrue to all of the exponents of scientific medicine in the community served by the paper. County societies will find it to their advantage to investigate this matter and give it more than casual consideration.

#### CAUSES OF DEATH

Mortality statistics are generally regarded as of considerable value. Tabulated returns from large territories have established the importance of methods of prevention as well as methods of treatment in numerous diseases. Nevertheless

it has to be admitted that our mortality statistics under present conditions cannot be accurate, for in entirely too many instances the cause of death as stated by the attending physician is simply one of several probable or possible causes of death, under the conditions found. Physicians are frequently required to certify to the cause of death in cases in which no history could be obtained and the physical findings were so limited and indefinite or so disguised by approaching death that a diagnosis was impossible.

In some of the large hospitals where autopsies are held on all those who die in the hospital, a considerable number of errors in diagnosis and unexpected causes of death are discovered. Such being the case it is obvious that too few autopsies are made.

This is partly due to sentiment on the part of the friends of the deceased, but more largely due to the timidity of the attending physician, fearing to offend some of those bereaved. In many such cases the relatives would like to know the cause of death and would readily give their consent if asked for it, sometimes they even suggest it themselves. There are occasions when the attending physician has no time to hold an autopsy; there are also occasions when he may prefer not to have such a test of his accuracy in diagnosis; there are also occasions when the friends of the deceased prefer that the cause of death be not made known.

None of these things, however, should interfere with legitimate efforts to improve the accuracy of mortality records. It seems reasonable that autopsies in all cases where the cause of death is at all in question should be given official sanction. This could be accomplished by making a slight amendment to the laws which prescribe the duties of a coroner. It could be provided that the coroner should



order an autopsy in any case of death when the cause is not definitely known and either the attending physician or the nearest relative or friend of the deceased requests him to do so.

One wonders, if a bill providing for such an amendment were introduced in the next session of the legislature, if the strongest opposition to its adoption would come from members of the medical profession or from the people of the state. If such an amendment were adopted, would the medical profession or the people avail themselves of its provisions for the purpose of scientific accuracy, or would they only take advantage of it when there were disputes between attending physicians, or when the family and friends of the deceased were dissatisfied with the diagnosis and treatment?

#### —R— **CHIPS**

A recently published medical dictionary authorizes the use of the term "acute abdomen" but restricts it to "any acute condition within the abdomen calling for immediate operation."

Franklin W. White, *New England Journal of Medicine*, October 11, says: "The mere presence of gall stones is not an indication for operation, many silent stones show a gall bladder wall that is bacteriologically negative, cholesterol stones especially lie dormant for years. Surgery should be based on symptoms, not on the mere presence of stones or low grade infection. I believe that most of such patients escape perceptible injury to other organs."

Decreasing birth rates seem to be the rule now. England had a lowered birth rate in 1927. In the United States the rate has been falling since 1915, but there has also been a steady fall in the death rate. Various opinions have been given as to the causal factors and as to what a continued decrease in birth rates portends. Living conditions are held as responsible by some. The apparently growing practice of birth control is also

credited with being an important factor. Back of it all is the growing independence of women. Women who are capable of self support are in a position to determine, at least to a large extent, the number of their own contributions to the human race.

Upon the theory that migraine is due to spasm and subsequent dilatation of the cerebral arterioles and that the spasm is evolved by nervous impulses reaching the cerebral vessels through the sympathetic nerves, Tzanck began the use of ergotamine tartrate, a depressor of the sympathetic, in these cases. His results as reported seem to justify further clinical trials of the drug. It is administered by mouth, 2 mg daily, and an additional 2 mg when an attack is threatened. The cases treated showed improvement, the intervals between attacks were considerably lengthened. In some of the cases attacks could be aborted by early administration. If not more than 2 mg per day was given no ill effects were observed. Cases of gangrene following the administration of this drug have been reported, so that careful supervision of the treatment is advised.

The recent popularity of ephedrine in the treatment of asthma and hay fever, and its indiscriminate use, have brought to light some of the ill effects to be expected from its administration. Numerous cases have now been reported where alarming symptoms have been produced, especially in patients with cardiac disease. Bloedorn and Dickens, in the September number of the *Archives of Internal Medicine*, state that ephedrine is a dangerous drug to use when patients show evidence of cardiac damage. Careful diagnosis to distinguish between bronchial asthma and cardiac asthma should be made. Ephedrine may produce cardiac decompensation they claim. The drug should be discontinued in patients who show palpitation, tachycardia, arrhythmia or vasomotor disturbances.

One frequently finds in the current medical literature the expression, "a shift to the left in Arneith's count" in reference to certain blood pictures. In 1904 Arneith suggested a method of

classification of neutrophils in a differential blood count. He divided these into five groups: 1. Those with round or indented nucleus, constituting five per cent normally. 2. Those with two nuclear divisions, constituting thirty-five per cent. 3. Those having three nuclear divisions, constituting forty-one per cent. 4. Those having four nuclear divisions, constituting seventeen per cent. 5. Those having five or more nuclear divisions, constituting two per cent. These percentages are fairly constant in health, but may show marked variations in disease without a change in the total leukocyte count. When the percentage in the lower classes is increased at the expense of the higher there is said to be a shift to the left. In arriving at what is termed an "Arneth index" the percentages of the first two groups and one-half the percentage in the third group are added together. This gives an average normal index of 60. An increase of this index is a shift to the left.

More recently Schilling suggested a modification of Arneth's method which apparently simplifies the laboratory procedure. He divides the neutrophils into four groups: 1. Myelocytes. 2. Young forms. 3. Staff forms, with T, U or V shaped nucleus. 4. Those with a segmented nucleus. In infectious there is first an increase in staff forms, and with a moderate stimulus there is an increase in young forms, and with a strong stimulus there is a marked increase in young forms and also an increase in myelocytes. It is customary in recording the count to write the names of the groups in regular order from left to right—myelocytes, young forms, staff forms, segmented forms. An increase in young forms and myelocytes is a shift to the left. Niehaus, *Medical Clinics of North America*, September, has reported some observations on the value of the Arneth-Schilling count and concludes that it may be of considerable value in prognosis in cases of infection.

G. Arbour Stephens, a consulting cardiologist to King Edward VII Welsh National Memorial Association and consulting physician to several hospitals, has an article in the October number of

the *Medical Review of Reviews* in which he suggests that fleas are responsible for rheumatic fever and rheumatic heart disease. He recapitulates his argument as follows: 1. Heart disease occurs only in those children who do not partake of milk, and possess a perverted appetite for the acids, such as vinegar and lemons. 2. The children of this sub-class are very attractive to fleas and react badly to their bites. 3. The part of the world where fleas and rheumatic heart disease are found are coextensive. He also suggests that the flea is an intermediate host for some parasitic protozoon. He offers no clinical evidence to support his premises nor any experimental evidence that rheumatic fever can be produced by flea bites. Few practitioners with experience will accept his assumptions or his conclusions.

The following is taken from the address of Frank I. Ridge, M.D., President-elect of the Missouri Medical Association, published in the *Journal of that organization*:

"The present day diagnostic clinic heart specialist does not listen to a heart or take a pulse. As a matter of fact, he may not even see you. A technician, perhaps a high school graduate, hooks you up and tunes you in on a radio-like machine. The specialist sees a movie photograph of your static reaction and tells you that you are suffering because of a bloc in your right bundle branch. So much and no more. That is your diagnosis—the machine makes it clear.

"On the other hand, when you go to your home physician he will watch your breathing, take a look at your ears, your finger nails and your ankles. Ears and finger nails can tell one much about a heart function. He will find out how far you can walk and how many pillows are necessary for sleep. He will actually feel your pulse and listen to your heart and lungs. If you mention your right branch bundle bloc he will tell you that he is not sure whether it is right branch, big creek, or the southeast quarter, but he is sure that your heart is not working efficiently. Then he will set about to steady your heart, relieve your liver con-



gestion, stimulate your kidneys, regulate your diet, and pull your circulation together. He will give you more treatment than diagnosis, but you will feel better. He also knows the diagnosis. True, his work is not nearly so dramatic or so impressive a show as that of the clinic specialist who graduated two years ago and since then has been working solely on electrical mechanical reactions."

Dr. J. T. Scott of St. John has compiled some diet lists that ought to appeal to the doctors for their convenience in prescribing diets for their patients. There are three of these lists. One is for a normal diet, another is for a reducing diet and the third is useful in the acid ash and acetone types of acidosis. In these lists all the foods permissible for each meal are listed and the patient selects from the list a certain number of the foods he desires. The amount of each food allowed is also stated so that the total food selected will have the proper caloric value.

—————R—————

### Communications

Editor, Journal of the Kansas Medical Society,  
Topeka, Kansas.

It is not my intention to comment upon the policy of the Medical School with respect to the Orthopedic Clinics, the one established at Pittsburg, Kansas, in particular; however, I wish to say that apparently Dr. Howard E. Marshbanks, in his letter to the Journal of October, 1928, is not entirely informed concerning the real status of handling patients at that Clinic.

Dr. Marshbanks makes the statement, in that letter, that the patient who applies for consultation at the clinic and who is seen by the specialist does so with the knowledge of his physician and that no patient is seen without the doctor's knowledge; and that the Crawford County Medical Society controls the details of management and selection of patients who are legitimate subjects for the clinic.

I wish to say, in reply to that, that the mother of one of my patients, a young boy of twelve years who was suffering from subacute osteomyelitis, heard about the Pittsburg Clinic and without my knowledge was seen by the specialist and the mother advised as to treatment.

I think that the territory that the Pittsburg Clinic is intended to cover would be a great deal more benefited if the Crawford County physicians were relieved of the responsibility of controlling the details and management of selecting legitimate patients for the clinic and, instead of that, the specialist be requested to ask the patient for a letter from the physician who has charge of the case.

Respectfully,

J. A. KNOOP, M.D.

### SOCIETIES

#### NORTHEAST KANSAS MEDICAL SOCIETY

The regular fall meeting of the Northeast Kansas Medical Society was held in Lawrence on Thursday, October 25. The following program was presented:

Dr. V. M. Auchard—Post Operative Tetanus.

Dr. G. W. Jones—Gastric Ulcer.

Dr. J. B. Henry—Gas Bacillus.

Dr. H. L. Chambers—Fracture of Radius, Open Treatment.

Dr. R. H. Edmiston—Hypertension.

Dr. H. T. Jones—Fracture of Tibia.

Dr. M. T. Sudler—Tertiary Syphilis.

Dinner at 6:45 p. m.

Dr. L. P. Engle of Kansas City, Mo.—  
The Classification and Treatment of Goiter.

#### DICKINSON COUNTY SOCIETY

The Dickinson County Medical Society met at Abilene, Kansas, on October 18 as guests of the Abilene doctors for supper. Those present were Drs. Turner and Klingberg of Hope, Dr. Chaffee of Talmadge, Dr. Greenlee of Chapman, Dr. Kroesh of Enterprise, Dr. Entz of Woodbine, Dr. Petersen of Herington, Drs. Conklin Sr., Dieter, Hines, Witmer, Steelsmith of Abilene. Dr. Alfred O'Donnell, councilor for our district, was present and read a paper on "Penetrating Wounds of the Abdomen Through the Rectum."

On motion it was decided to hold the next meeting in honor of Dr. J. A. Ketcherside who has been in active practice for over 55 years. This meeting will be at Hope.

The following officers were elected: Dr. T. R. Conklin, Sr., President; Dr. C. N. Chaffee, Vice President; Dr. Daniel Petersen, Secretary-Treasurer; Dr. H. R. Turner, Delegate; Dr. W. A. Klingberg, Censor.

DANIEL PETERSON, M.D., Secretary.

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### Kansas Medical Auxiliary

AUXILIARIES OF KANSAS STATE MEDICAL SOCIETY

#### First District

Brown-Nemaha Auxiliary—13 members.

Pres.—Mrs. W. W. Nye, 614 Shawnee Ave., Hiawatha.

Sec.—Mrs. F. J. Austin, 704 Miami

Ave., Hiawatha.

Treas.—Mrs. H. J. Lowry, Morrill.

*Sixth District*

Sedgwick County Auxiliary—37 members.

Pres.—D. W. Basham, 824 N. Emporia, Wichita.

Treas.—Mrs. Opie Swope, 245 Pershing, Wichita.

*Eighth District*

Saline-Ottawa County Auxiliary—24 members.

Pres.—Mrs. J. K. Harvey, Salina.

Sec.—Mrs. Porter Brown, Salina.

Treas.—Mrs. C. M. Jenney, Salina.

*Ninth District*

Norton-Decatur County Auxiliary—7 members.

Pres.—Mrs. J. H. A. Peck, St. Francis.

Sec.—Mrs. F. J. Walz, St. Francis.

*Tenth District*

Central Kansas Auxiliary—22 members.

Pres.—Mrs. J. B. Carter, Wilson.

Sec.—Mrs. V. R. Parker, Natoma.

Treas.—Mrs. D. R. Stoner, Ellis.

Members at large—47.

Sedgwick County Auxiliary is putting on a membership campaign. This auxiliary though organized only last May, has planned its programs for the year, and had them printed for each member's convenience. The first meeting is in the form of a reception for the nurses in training at the various hospitals, to be given at Wichita Country Club on October 16.

Dr. F. A. Carmichael, Superintendent Osawatomie State Hospital, will give a lecture on Heredity, illustrated with slides, on November 19, under the auspices of Twentieth Century Club which numbers more than 600. One program is based upon clippings from Hygeia. This auxiliary hopes to enroll every woman eligible for membership before the close of the year.

MRS. D. W. BASHAM, Pres.

—R—

## DEATHS

John Higbee Johnson, Wichita, aged 68, died September 4 of paralytic ileus. He graduated from the Kansas City Medical College, Kansas City, Missouri, in 1890. Was formerly a member of the faculty of the College of Physicians and Surgeons, Kansas City, Mo.

William E. H. Lemon, Olathe, aged 82, died July 21 of angina pectoris. He graduated from the Homeopathic Medical College of Missouri in 1874.

James Henry Seaton, Newton, aged 89, died August 7 of cerebral hemorrhage. He graduated from the Kentucky School of Medicine, Louisville, in 1866.

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## BOOKS

Urology, a textbook for students and practitioners by Danial N. Eisendrath, M.D., assistant professor of surgery Rush Medical College; and Harry C. Rolnick, M.D., associate urologist, Mt. Sinai Hospital, Chicago. Published by J. B. Lippincott Company, Philadelphia.

The authors have spared no pains in making this book of service to the general practitioner as well as the urologist. The anatomy and physiology of the urinary tract have been carefully reviewed. The technic of examination has been carefully explained. The diseases of the urinary tract have been described and the most important points in differentiation have also been noted. Considerable space is given to surgical procedures and these are carefully described and well illustrated. Among the illustrations, which are numerous, a large number of roentgenograms are shown.

A practical Medical Dictionary by Thomas Lathrop Stedman, A.M., M.D., Tenth revised edition. Published by William Wood and Company, New York. Price \$7.50.

This dictionary contains five hundred new medical terms and a good many added definitions of older ones. Usage seems to legitimize the misuse of the English language in a ridiculous manner, for instance, in this edition the term "acute abdomen" is authorized. A dictionary is accepted as authority for the use of terms and one naturally wonders if those who prepare these books might not better ignore such misusage of words as that. This dictionary is complete, is made up with thumb index and flexible cover, and being just published contains most all of the new words.

International Clinics, a quarterly of illustrated clinical lectures and specially prepared articles edited by Henry W. Cattell, M.D., with the collaboration of numerous others. Volume III, thirty-eighth series, 1928. Published by J. B. Lippincott Company, Philadelphia.

Sajous has an article in this number dealing with rational endocrinology and



organotherapy as foundations for greater efficiency in practice. Pearl has an article on alcohol and life duration; he also discusses the subject of cancer from the viewpoint of the human biologist. Rolleston of England has an article on the clinical significance of abnormal blood pressure. Held and Gross discuss the medical treatment of liver and biliary duct. Porter discusses the composition and dietary value of vitamins. Piersol describes the visceral manifestations of syphilis. There are several other very interesting papers on subjects quite as important as these.

The Medical Clinics of North America, September, 1928. Published bimonthly by W. B. Saunders Company, Philadelphia. Price per clinic year, paper \$12.00, cloth \$16.00.

The contributions to this number of the Clinics are all from men connected with the University of Nebraska College of Medicine. There are twenty-two contributors and the subjects discussed are: Hypothyroidism; gastrojejunal fistula; tetany following thyroidectomy; physical examination of the heart; glycosuria, thyroid disease and diabetes; subacute bacterial endocarditis; two cases of widely different types of pulmonary tuberculosis; value of leukocyte counts according to Arneith-Schilling method; otitic brain abscess; ocular complications of diabetes; disturbances in growth; pyelonephritis; granuloma coccidioides; goiter; chronic infectious arthritis; the undernourished child; abdominal pain in children with upper respiratory infections; the great omentum; perforation of the small bowel; orthopedic measures in the treatment of arthritis; vomiting in children.

Syphilis, acquired and heredosyphilis by Charles C. Dennie, B.S., M.D., assistant professor of dermatology and syphilology, University of Kansas School of Medicine, etc. Published by Harper and Brothers, New York. Price \$2.50.

The author writes largely from his own experience and presents his observations in a very simple and lucid style. He discusses the pathology of the disease, the various diagnostic procedures, the peculiar characteristics manifested by its invasion of various organs and systems of the body. Various methods of treatment are carefully described,

with indications and contraindications for use. The subject seems to have been quite thoroughly covered.

Criteria for the Classification and Diagnosis of Heart Disease, by a committee appointed by The Heart Committee of the New York Tuberculosis and Health Association, Inc. Published by Paul B. Hoeber, Inc., 76 Fifth Avenue, New York. Price \$1.50.

The aim of the book is to facilitate the making of records which will aid the clinician in making more accurate diagnoses and also to make such records of value to other clinicians, because, when made in accord with the classification and nomenclature outlined here, all clinicians using such records will be "talking a common language."

A Text Book of Surgery. By W. Wayne Babcock, M.D., F.A.C.S., professor of surgery and of clinical surgery in the Temple University, Philadelphia; surgeon to the Samaritan Hospital and to the American Hospital for Diseases of the Stomach. Octavo of 1367 pages with 1050 illustrations, 9 of them in colors. Philadelphia and London: W. B. Saunders Company, 1928. Cloth \$10.00 net.

New text books on surgery will continue to appear as long as new facts are discovered and new methods supplant the old. New books that describe the newer methods are just as necessary as new instruments or equipment. The author has done much toward the further advancement of surgery in preparing this work. It presents the modern conceptions of surgical pathology as well as the modern surgical procedures. It is a complete text on the subject.

Essentials of Prescription Writing. By Cary Eggleston, M.D., assistant professor of clinical medicine, Cornell University, Medical School. Fourth edition, revised. 16mo of 153 pages. Philadelphia and London: W. B. Saunders Co., 1928. Cloth, \$1.50 net.

This is just a little book that one can put in his pocket, but its importance is entirely out of proportion to its size. It is not a book of prescriptions but a text on prescription writing. There is some very important information concerning the use of Latin though the author encourages the use of English in prescriptions. He also encourages the use of the metric system and has devoted considerable space to it. We can all get something worth while out of this little book

### **Admiral Grayson Heads Gorgas Memorial**

Washington, D. C., November 1, 1928.  
—(Special)—Formally accepting the presidency of the Gorgas Memorial Institute which was recently tendered to him at the annual meeting of the Board of Directors held in Boston on October 10, Rear Admiral Cary T. Grayson announced today that it would be his purpose to maintain the field operations of the organization and to expand its publicity features as far as funds will permit.

"The plan of sending out trained speakers to appear before leadership groups of the various cities of the country in 'caravan' health trips will be continued," he said. "To close the gap between the public and scientific medicine by a tremendous health educational campaign is an imperative issue. We will continue to work in this direction by added newspaper publicity, radio talks, poster service, health crops organizations, and by platform appearances."

Admiral Grayson's application for retirement from the active list of the Navy, effective November 1, has been acted upon favorably by President Coolidge, so that he will be able to devote his entire time to the Memorial activities. President Coolidge is the Honorary President of the Gorgas Memorial. The Surgeon Generals of the United States Public Health Service, Army and Navy, are on the Board of Directors.

—R—

### **The Precursor of Vitamin D: Ergosterol**

Following the discovery that foods may be made antirachitic by irradiation with ultraviolet light, it was shown that the substance which is activated by the rays is ergosterol. A precursor to vitamin D had thus become established. Activated ergosterol was shown to be a hundred thousand times as effective from the standpoint of its effects on rachitic animals, as cod liver oil. This irradiated ergosterol needs careful standardization and evaluation in terms of curative potency, because an excessive dose may cause "hypermineralization" in the blood in the normal as well as the rachitic infant. The usual dose in infants for cure thus far has been given in the form of oil solutions containing

the equivalent of from 2.5 to 5 mg. of irradiated ergosterol. Evidence has been presented which strengthens the assumption that only a molecular structure such as that possessed by ergosterol enables a sterol to be photo-chemically converted into vitamin D, and confirms the view that ergosterol is the specific parent substance of vitamin D. Fortunately, there need be no limitations to its availability for therapeutic use if this is finally established on a sound basis. (J.A.M.A., October 13, '28.)

—R—

### **Ovarian Hormones and Ovarian Organotherapy**

The evidence from the experimental laboratories and the clinics, accumulated especially during the last few decades, points to the conclusion that the mammalian ovaries exercise their influence on the so-called secondary sex characters and the sex life of the mammalian female through the mechanism of the hormones produced by some element in the ovary. It is therefore rational to treat or attempt to treat symptoms due or presumably due to ovarian insufficiency by substitution therapy. Summing up the extensive clinical trials with ovarian preparations, generally administered orally, Novak, in 1924, stated that the results are rarely striking and often nil to the level-headed observer. Much work has been done on the separation and concentration of the so-called follicular ovarian hormone and preparations have been obtained which, when administered parenterally, are reliably reported to stimulate uterine growth and to introduce changes similar to estrus in sprayed animals. To date the use of such preparations on patients has been neither extensive nor encouraging. The various ovarian hormone preparations that now seem sufficiently purified to be introduced hypodermically without serious results to the patients should be given trial in definitely uncomplicated ovarian deficiency in order that more may be learned as to their actual effects. (J.A.M.A., October 20, '28.)

—R—

### **Commendable Research**

The growing activities of commercial firms in chemo-therapeutic research, in



collaboration with universities and clinics, has led to much favorable comment on the part of the medical profession. Never has there been a time in the history of medicine when such important research developments have taken place, and are now under way.

As an example of what can be accomplished, the Abbott Laboratories, North Chicago, Ill., has, during the past ten years, taken a place in the front rank of pharmaceutical manufacturers through its successful research work. It is understood that this firm, together with its subsidiary, the Dermatological Research Laboratories of Philadelphia, expended over \$100,000 in research work in the year 1927. New and important discoveries for the use of the medical profession have resulted from these scientific investigations and other work is in progress.

A new scholarship for chemo-therapeutic research at Northwestern Medical School of Chicago has just been announced by Dr. Alfred S. Burdick, President of the Abbott Laboratories.

—R—

### **Meralgia Paraesthetica**

Byron Stookey, New York (J.A.M.A., May 26, 1928), says that meralgia paraesthetica is a true traumatic neuritis of the external cutaneous nerve. Sharp angulation of the external cutaneous nerve as it leaves the pelvis is a low grade constant trauma to the nerve, which eventually produces irritation of the nerve and finally physiologic interruption. The syndrome and the mechanism correspond closely with that found in brachial plexus neuritis caused by abnormal angulation of the inner cord over a cervical rib, or ulnar neuritis caused by abnormal angulation of the ulnar nerve at the elbow due to fracture of the humeral condyles. Its treatment consists in section of the nerve at the exit from the pelvis without excision, the nerve ends being left in alinement so that spontaneous regeneration and subsequent nerve lengthening may take place. The term "meralgia paraesthetica" is little known; perhaps less confusion would occur were a more descriptive term, such as "neuritis of the external cutaneous nerve," used instead of "meralgia paraesthetica."

Furthermore, the term "algia" is seldom applied when there are objective disturbances in sensation, such as are commonly found in this disease. In conformity with accepted usage, the term "neuritis" and not "algia" should be used.

—R—

### **Ectropion of Lower Eyelids Following Burns and Scalds: New Early Pathognomonic Sign**

Cicatricial ectropion of the lower eyelids is a frequent and serious result of burns and scalds involving the face about the eyes. By no means all burns of this area result in ectropion. When recognized early, before the condition is well established, simple preventive measures may abort the process. Therefore it is important to diagnose this complication at the earliest possible moment. The sign described here is, in the opinion of Samuel Gordon Berkow, Perth Amboy, N. J. (J.A.M.A., May 26, 1928), the first positive manifestation of cicatricial ectropion of the lower eyelids, following burn or scald. To determine whether the eyelids are sufficiently involved for cicatricial ectropion to result, the patient is instructed to roll the eyeballs inward and upward; or a finger is placed on the patient's forehead between the eyes, and the patient is instructed to try to look up at the finger. As the eyeballs roll inward and upward, if a space, or interval, forms between a lower eyelid and the corresponding eyeball in the outer (lateral or external) third of the palpebral aperture, and persists as long as the eyeballs are kept in the upward and inward position, cicatricial ectropion is to be expected. Preventive measures should be instituted at once. These failing, there will next be angulation of the involved eyelid, followed by eversion of the ciliated lid margin, and then true ectropion.

—R—

### **RELAXATIVES**

✱ ✱ ✱

Where will the girls be vaccinated now?

✱ ✱ ✱

"A specialist is a man who knows more and more about less and less."

✱ ✱ ✱

"The new patient in Ward B is very good-looking," said the nurse.

"Yes," agreed the matron, "but don't wash his face. He's had that done by four nurses this morning."

## Diet and Theophylline in Treatment of Cardiac Failure

Further observations made by Fred M. Smith, Iowa City (J.A.M.A., Oct. 27, 1928), on a largely milk and carbohydrate diet previously reported have emphasized the importance of this feature in the treatment of cardiac failure. A greater significance is attributed to the carbohydrates and particularly the sugars of the diet. It is also suggested that the beneficial action of the carbohydrates on the liver injury induced by prolonged congestive failure may contribute to the effectiveness of the diet. Intravenous administration of dextrose solution is not advocated if the patient is able to take food by mouth. It is felt that the diet is a more effective means of providing sugars. Theophylline is a valuable measure in the treatment of the cardiac failure of arteriosclerosis. The best results are obtained in the congestive type of failure. Experimental and clinical observations support the belief that the elimination of fluid is promoted by the favorable influence on the coronary circulation. Theophylline in doses of 2 or 3 grains (0.13 or 0.2 Gm.) after meals has repeatedly been administered throughout the period of hospitalization and in some instances was continued after the patient returned home. There have been very few complaints of abdominal discomfort which could be attributed to the drug.

—R—

### RELAXATIVES

"So you met Alice today?"  
 "Yes; I hadn't seen her for ten years."  
 "Has she kept her girlish figure?"  
 "Kept it? She's doubled it."

✧ ✧ ✧

Wealth is a thing the earth is made to yield  
 By toil in factory, forest, mine and field;  
 And poverty is born when men abuse  
 A primal law—take more than they can use.

—Walt Drummond.

—R—

### EARLY REMINISCENCES

#### "A Dental Specialist"

There were no Dentists in those days,  
 And everybody knew it.  
 The Doctor could not treat a tooth,  
 All he could do was pull it.  
 Each Doctor had his "Pullicons,"  
 A word that's now quite rare,  
 But when there were no dentists,  
 You could hear it everywhere.

Old Uncle Billy Hastings came  
 To call on me one day,  
 He talked and talked, then talked some more,  
 And finally blurted—"Say,  
 I have a front tooth down below,  
 That's gettin' mighty loose,  
 And more than that it interferes,  
 When I spit 'baccar juice'."  
 "I just came in to ask you  
 If you're feelin' real stout,  
 And if you are, I sort o' think  
 I'd like to have it out."  
 He spread his mouth from ear to ear,  
 The snag almost dropped out;  
 I touched it with my finger and  
 The old man gave a shout.  
 "Hold up," said he, "don't handle it,  
 'I'm touchy 'bout my mouth,  
 Right now she's feelin' dryer  
 Than a long mid-summer drought.  
 I'll step into the drug store,  
 But soon return, I think,  
 It would be a good idea  
 To take a little drink."  
 He sallied forth, was gone some time,  
 A half hour near about,  
 Then came in smiling, took a seat,  
 "I'm ready, take her out."  
 I needed not a forcep—  
 To my fingers it gave way;  
 I fear he would have choked on it,  
 If left another day.  
 I held the snag before his face,  
 With satisfaction lit,  
 "Well, I declare," the old man said,  
 "It didn't hurt a bit.  
 "Now what's your bill, I'm ready  
 To pay you what is due."  
 "Well, I'll not charge you anything  
 For doing that for you."  
 "That's cheap enough—When I get sick  
 I'll now know what to do—  
 Just call a messenger and send  
 Him hurriedly for you."

J. T. SCOTT, M.D.

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### Epidemic Encephalitis and the Country Doctor

B. A. HIGGINS, M.D., Sylvan Grove

Read before the Kansas Medical Society at its Annual Meeting, May 8-10, 1928, at Wichita, Kansas.

Dr. Walter Freeman, in his article on "Specific and Non-specific Remedies in the Treatment of Epidemic Encephalitis," speaks of the "vast literature" of this disease.

I am a country doctor, far from city libraries and not a subscriber to the more technical journals. When I was confronted with several cases of epidemic encephalitis, I found that this vast literature is contained mostly in books which the average country doctor does not possess and in journals which are not accessible to him. I found that few of my country colleagues had seen more than one case, most of them, not any. So, of necessity, I became much interested in the disease—in its diagnosis, its treatment and especially in its prognosis. It seemed to me that the cases I have seen reported were the unusual, atypical cases, which are interesting but not especially helpful. I wish to give a brief account of four cases I have had and followed through, not because they are strange or unusual cases, but because they are fairly typical and what we are likely to meet at any time. And I wish to present some of the aspects of epidemic encephalitis which have been particularly interesting to me, a country doctor.

February 12th, 1921, I was called to see a man, white, married, forty-six years old. His health previously had been good. Two days before, he complained of severe occipital headache and became drowsy, the drowsiness coming on gradually. When I saw him, he could be aroused, would answer questions by "yes" or "no" and would eat and drink.

While sleeping, his facial muscles twitched constantly. There was marked ptosis of both eyelids. Temperature was 101°F. The somnolent stage lasted four or five days, then he became restless and irritable, and complained of double vision. This stage lasted about one week, when he began to improve rapidly. He was in bed just two weeks. All of the symptoms except diplopia cleared up in less than a month. The diplopia persisted for ten months, severe enough at times to interfere with his work as a carpenter, then it cleared gradually. I did no lumbar puncture. As soon as he was up he had three badly abscessed teeth extracted. His present condition, seven years later, is good, with no discoverable after effects of his encephalitis.

May 21st, 1923, at five a. m., I was called to see a married man, thirty-two years old, a farmer, previously healthy. He had arisen and started to build a fire in the kitchen stove, when he became very dizzy and then, in two or three minutes, unconscious. We had had two days of hard rain and my patient did not live on a through tourist highway. I had to make ten miles of our very best Kansas mud and it probably was more than an hour before I saw him. He was in a state of collapse, unconscious, skin leaky and ashen, heart action very weak, rapid and irregular, pupils widely dilated. I gave caffeine and sodium benzoate hypodermically, applied heat and used other restoratives through a long forenoon. He did not begin to rally 'till about eleven o'clock, six hours after the beginning of his attack. Then began a four weeks' fight, a losing one. He developed a terrific headache, with pain in back of neck, rigidity of neck muscles and somnolence. Temperature was around 102°F, and pulse was variable. On the second day of his illness, I did a lumbar puncture

to relieve his headache. The fluid came out under considerable pressure and was very bloody, having the appearance of nearly pure blood. It was the easiest lumbar tap I ever did. The relief to his headache was very prompt, but lasted only about forty-eight hours. He went from the lethargic stage to the stage of irritability in about five days. He suffered almost constantly with cephalic pain except when temporarily relieved by lumbar puncture. I did five of these. The fluid never cleared up. The last tap, made three weeks after the first, was still bloody though not so thick as at first. He had ptosis and diplopia, but no facial or other paralysis. He showed no special improvement, and finally developed a terminal pneumonia and died four weeks after the beginning of the attack. I had many consultants, and opinions varied between meningitis, brain tumor, vascular syphilis and some other less well known complaints. The negative Wassermanns on patient and wife, absence of choked disk and a thorough examination of the spinal fluid, finally confirmed the diagnosis of epidemic encephalitis which I had made. Among other consultants, Dr. Howard Moses and Dr. Karl Menninger saw this patient with me. The great severity of the attack and the very bloody spinal fluid were especially interesting to me.

July 3rd, 1926, I was called to see a young married woman, age nineteen, because of severe headache and general weakness. She was of a very unstable, neurotic family. She was eight months pregnant but had felt no foetal movements for two weeks. Her blood pressure was over two hundred and her urine was loaded with albumin and showed casts and some red blood cells. She was taken to the Ellsworth Hospital, July 4th, and was delivered of a macerated foetus July 5th. Her symptoms cleared up and she came home in a little over two weeks. She took no care of herself and continued weak, though blood pressure and urine apparently were normal.

Seven weeks after her first illness, on August 27th, 1926, she went with her younger brother to the river to fish. She suddenly became nauseated and vom-

ited, then walked a short distance to her car and fainted. She was unconscious only a short time, then was able to get into the car and drive home, about two miles. I saw her almost immediately, at about 7:30 p. m. The vomiting became severe and lasted through the night. The next morning we noticed that the right side of her face was paralyzed, the pupil on the right side dilated, the opposite one reacting well to light. Ptosis was marked. She became lethargic but could be aroused. When aroused, she complained of severe headache. Later that day her speech became affected, being very hard to understand. Her parents refused to allow me to do a lumbar puncture. I gave a few doses of sodium salicylate intravenously, but she was quite fleshy and the veins hard to find. She was hyper-sensitive and her parents soon refused to allow me to give the intravenous medication. I gave methanamine, sodium salicylate and acetylsalicylic acid by mouth, as much as she could take. Her lethargic stage lasted nine or ten days. She never had any irritable stage. She had ptosis, diplopia, transient paralysis of right arm, left leg, and right side of face, these different areas being involved at different times. The paralysis of the right arm came last and lasted longest. There was some rigidity of the neck muscles, though it was not marked. When the somnolent stage passed, she became childish, laughing a great deal at her simple jokes. There was much headache. Fever never going over 102°F, persisted for twelve days. Her improvement was very slow. She has been left a pitiful wreck with the mind of a six year old child, eyes not equal, head drawn to one side, stiff limbs and speech blurring and thick. Dr. Alfred O'Donnell saw her with me and agreed with my diagnosis.

My fourth case began six days after the last one reported. The patient was a robust, healthy, energetic young farmer, twenty years old, entirely well except for an ear which had discharged intermittently since childhood. The beginning of his sickness was unusual. On September 2nd, 1926, he was harrowing with a six horse team. He ate a good



mid-day meal, then complained of being very tired, which was unusual for him. His father told him to take a good rest and he slept about two hours. He came from his room complaining of still being tired, but harnessed his team and started for the field at about 2:30. At 7:30 his parents found him lying unconscious in the field. He never had reached the place where he was going to work. He had gone a short distance from where he had stopped his team and his bowels had moved. He started back to the team and he had vomited. Then he had fallen before he reached the team. He evidently had lain there on his back for nearly five hours. Fortunately it was a cloudy, comfortably warm afternoon. He was able to help his father a little in getting him into the car, but was limp and helpless on the ride home. I saw him in a very short time. He answered "yes" or "no" when questioned, but would say nothing more. His pupils were widely dilated when I first saw him but soon, after cold had been applied to his head, they became pin-point. There was marked bilateral ptosis. I could find no evidence of head or other injuries. Pulse was sixty-six, temperature 99°. He used the urinal when it was presented and he was told to. He also drank water and swallowed readily the small doses of calomel I gave him. Unless disturbed, he slept quietly, never changing his position through the night. The next morning the lethargy was about the same but he complained of severe pain in head, back of neck and spine. There was rigidity of neck muscles and considerable retraction of head. I did a lumbar puncture that morning with my patient screaming and fighting. Dr. L. A. Kerr, who was with me in consultation, the nurse and the patient's father, who is a strong farmer, held him with much difficulty. In spite of the struggle, I found the canal easily and again I found bloody fluid under considerable pressure. His headache was relieved temporarily. I began at once giving sodium salicylate intravenously. His hyperesthesia continued for about a week, and every intravenous injection was given with the patient struggling

and screaming. Then one morning, without any other apparent change in his condition, he calmly watched me as I gave the injection. Dr. G. Wilse Robinson of Kansas City saw him with me one week after the onset and did a lumbar puncture. The fluid was still bloody but under normal pressure. An examination of the fluid confirmed the diagnosis of epidemic encephalitis. The condition gradually improved and in December, three months after the beginning of the attack, I considered the patient well and stopped treatment.

February 5th, 1927, two months later, five months after the first attack, he complained of sore throat and felt sick and uncomfortable. The next day, while talking to his mother, he fell onto a couch unconscious. He regained consciousness in about thirty minutes, but was deeply lethargic and in about the same condition as in the first attack. He complained much of pain in head and on the following day, I did a lumbar puncture. The fluid again was bloody, but under normal pressure. The symptoms gradually cleared up again, but for nine or ten months, his back and thigh muscles were stiff and his memory was poor. I continued treatment with sodium salicylate for one year, at first giving thirty-one grains every second day and for the last six months, twice weekly. In November, 1927, I gave three doses of typhoid vaccine. In December, 1927, his ear was operated on and the old otitis media cured. Today he appears to be perfectly well, a hard working, energetic, healthy jolly young man. I wish I could believe he is well. His parents know that I think he may have another attack or develop Parkinsonism at any time. This seems to be about the usual outcome: one patient dead; one a hopeless invalid, physically and mentally; one apparently well after seven years; one apparently well after fifteen months, but who may be only in the latent stage, with much worse things to come.

McCrae, in his last revision of Osler's Practice of Medicine, speaks of epidemic encephalitis as this disease of protean manifestations. It may develop slowly and insidiously, or it may strike with

lightning-like rapidity. There may be a slowly developing lethargy with some ptosis or eye symptoms and with weakness and low fever and perhaps a transient paralysis of an arm or leg, or the patient may be found unconscious.

The four most important signs in the diagnosis of the average case are lethargy, weakness, cranial nerve paralysis and low fever. Lethargy is our most important symptom but it is not present in every case. It is peculiar, for while the patient seems to be sleeping deeply, he will answer if spoken to and will eat and drink. In many cases, he will voluntarily attend to the evacuation of bowels and bladder though frequently these acts become involuntary. This lethargy may deepen into coma, though this is not usual. Extreme weakness is present in practically every case. This is much greater than would be expected from the length of the illness or the severity of the other symptoms. Sometimes the patient is so weak that he cannot raise his hands or turn in bed. According to which cranial nerve or which brain area is affected, we may have ptosis, diplopia, disturbances of accommodation, paralysis of eye muscles, irregular nystagmus, paralysis of the face or tongue, or twitching of the facial muscles, or disturbances of respiration or deglutition. The speech frequently is affected. This is due to partial paralysis of the tongue and throat muscles rather than to affection of the speech center. In one of my cases, the speech was blurred and jerky and there was a tendency to repeat single words over and over in a monotonous tone, evidently in an attempt to make her listeners understand what she was trying to say. There are frequently transient paralyses of the extremities, especially of the arms. If the patient recovers, these generally clear up quickly. The paralysis of the facial muscles occasionally does not clear up, and the patient presents a distressing appearance, with saliva dripping from the side of the mouth, due also to stimulation of the salivary glands. There may be a greasy appearance of the face due to a seborrheic condition of the skin. One of my patients sweat profusely. The tem-

perature is characteristic. It is seldom high, not much over 101° or 102°F, except in the terminal stage when there may be a hyperpyrexia. The pulse is variable, though it is apt to be slow. Constipation is the rule. Rigidity of the neck muscles and retraction of the head are sometimes present. So also is Kernig's sign. These show meningeal involvement secondary to the encephalitis, but may make the diagnosis more difficult.

Sometimes the diagnosis is not difficult, but again it is far from easy. The condition is so serious and so unusual that I have felt like getting all the help possible from consultants, and several colleagues have seen each case with me. In making the diagnosis, the following were considered: auto-intoxication, uremia, cerebral hemorrhage, brain tumor, meningitis and vascular syphilis; tuberculous meningitis and influenza also came in for careful consideration. My diagnoses were not made at my first visit but after several examinations. I believe the diagnosis of epidemic encephalitis is as likely to be made by the country doctor who watches the case carefully as it is by the specialist, no matter how good he may be, who is called in consultation and who sees the patient only once. But the name and reputation, as well as the learning and skill, of the eminent specialist, are a wonderful help in time of trouble to the country doctor in cases of epidemic encephalitis.

No diagnosis is complete without a lumbar puncture and a report from the laboratory. The spinal fluid generally is negative, normal in appearance, not under much pressure. There may be a slight increase in polymorphonuclears, globulin is usually increased, but may be either increased or diminished. Of course, meningococci, tubercle bacilli, staphylococci, influenza bacilli, and pneumococci are absent. From two patients, I have gotten bloody fluid. In both of these cases, the onset was sudden and very severe.

The prognosis always is uncertain with the chances greatly against the patient's complete recovery. Twenty-five per cent to thirty-five per cent die in the initial attack. Freeman says: "Seventy



acute attack show various disease manifestations, ranging from mild conduct disorders to complete and permanent physical disability due to paralysis agitans in its gravest form. Apparently then, only one patient out of six ever recovers completely."

The pathology and bacteriology of epidemic encephalitis interest the country doctor only indirectly. If the so-called sequelae are as many investigators seem to have proved, not post encephalitic but rather the manifestations of its chronic stage, then the epidemiology is of great interest to us. The disease is generally believed to be mildly contagious and the contagion to be spread by the virus or organism in the discharge from the patient's nose and throat. Freeman in 1926 had gathered reports of seven cases in which acute encephalitis developed in persons associated with others who had had the acute attack long before. So it appears that the organism or virus persists in an active state for an indefinite time. If the danger of contagion lasts for years after the acute attack, we have a problem which is exceedingly grave and which will be increasingly grave as the years go by.

The late manifestations are the most serious part of the disease. The death rate—25 to 35 per cent—is terrible enough but there are much more terrible things than death which may happen to a human being. Authorities agree that many cases of epidemic encephalitis are overlooked or not diagnosed. What will be the outcome of these cases, no one can tell. If fifty per cent to seventy per cent of these unrecognized cases are to be left impaired in body, mind or soul as are the recognized cases, then our problem and responsibility are heavy indeed. The seriousness of the effects of epidemic encephalitis seems to have been recognized and studied more abroad than in the United States. In England there has been a good deal of investigation of juvenile crime and delinquency in relation to the mental and moral breakdown of the victims of this disease. A bill was introduced in the British Parliament about a year ago providing for

special procedure in this class of cases, and for care and treatment, rather than punishment, for these unfortunates. So far as I know, this point has been overlooked by alienists and criminal lawyers in this country. A search into the unusual or suspicious illnesses of some of our young criminals might do more to keep them from the gallows than a search into the history of their remote ancestors. In the young, the changes in conduct and mentality may be progressive, following what appears to be a mild acute attack. There may be no physical signs of late manifestations. In adults the late manifestations may be delayed for months. There may be recurrences of the acute attack, or in a few months, the patient may have stiffness of the neck or in the limbs, tremors in fingers or jaw, difficulty in rising from the sitting position, and progressive fixity of facial expression. The immobile, mask-like face, the pill-rolling motion of thumb and finger, and the characteristic gait, the patient bent forward and walking with short shuffling steps, and the tremor, are the well known signs of Parkinsonism. These symptoms slowly progress till in a few years our patient is slowly dying from inanition and progressive cachexia, or more happily has been taken off by an intercurrent disease.

The treatment of the acute attack in the home presents some difficulties. I have had to do much patient explaining before the relatives would allow me to do spinal punctures or administer intravenous medication especially if the patient is hyper-sensitive. A lumbar puncture at the beginning of the attack is an aid to diagnosis should be done in every case. It is our best treatment for headache and restlessness. There have been warnings against repeated punctures because of the danger of spreading the infection, but most authorities recommend that it be done as often as necessary. In the literature available to me, published in the last two years, sodium salicylate, intravenously, stands out as the most widely accepted remedy. Thirty-one grains in twenty cc of 10 per cent solution of dextrose in water should be

given daily through the acute attack, or oftener in severe cases. I believe it should be given at longer intervals for several months. The addition of dextrose prevents the obliteration of the veins, which is rather frequently caused by solution of sodium salicylate in water alone. If the patient's stomach will tolerate it, sodium salicylate or acetylsalicylic acid in large doses by mouth will nearly, but not quite, take the place of the intravenous sodium salicylate. Methanamine has been much used, largely, I believe, because we usually give that drug when we do not know what else to use. Its use in this disease is much less popular now than it was two or three years ago. Sodium iodide and sodium cacodylate have been extensively used, but the tendency now is to depend on the salicylate. Strecker of Philadelphia and Marx of Munich are enthusiastic over their results with acriflavine intravenously. Collins in the British Medical Journal recommends protein shock produced by intra-muscular injections of sterilized milk. Typhoid vaccine, three doses given at weekly intervals, is much used and I believe is useful. It is more convenient to give in the home than sterilized milk and the effect probably is the same. Gentian violet is not toxic and good results are reported from its use. Paulian of Marseilles and many others, both in this country and abroad, have reported most excellent results from the injection of inactivated auto-serum into the spinal cavity, or of the patient's spinal fluid into his veins. Sodium bromide or luminal may be used when needed for restlessness and irritability. Abscessed teeth should be removed and all other foci of infection should be sought for and removed. Of course, we are all hoping that the labors of Freeman, Flexner and Rosenow, and others working on this problem, may soon give us a specific anti-serum against encephalitis, but it does not seem to be available as yet.

For the relief of the symptoms of Parkinsonism, scopolamine or hyosine is given in doses of 1/200 gr. to 1/100 gr. two or three times daily, or more if the patient tolerates the drug well. Bella-

donna in fairly large doses also gives relief. Inoculation with malarial organisms as in locomotor ataxia, has been tried and some good results have been reported. In the London Lancet of October 27, 1927, Craig reports eight cases much improved by malarial inoculation, and in the same issue MacCown and Cook utterly condemn it. In England much institutional work has been done in treating and training patients, especially children, left mentally defective following encephalitis. Out door living, gentle but firm discipline and proper food and surroundings have done much for these unfortunates.

Prevention is of course infinitely better than cure. In reading the literature of this disease, two things have interested me very much. One is the possibility of epidemic encephalitis following vaccination for small pox. Levaditti and Nicalau in the Medical Press of Paris of February 5th, 1927, state that they know of one hundred cases of encephalitis of the epidemic type following vaccination. In Netherlands the 1924-1925 statistics give thirty-five cases of post-vaccinal encephalitis. In Spain there were no cases following two series of vaccinations totaling about thirty-three thousand, a result the Spanish authorities believe is due to their different method of vaccination. They use an emulsion of small pox virus grown in rabbits' brains. This is said to be easily prepared and is not contaminated by associated organisms. The possibility of a post-vaccinal encephalitis is very remote, probably, according to European statistics, not one in ten thousand. But even that small risk inspires dread and gives the antis and the cultists a chance to talk which they do not need. Perhaps there will be a change in our method of vaccination in the next few years.

In an investigation of the Sheffield, England, outbreak of epidemic encephalitis in 1924, the Medical Research Council reported there is not any reliable evidence that the disease is spread by direct contact. Every other authority I have seen regards the disease as mildly contagious. If it is contagious, what are we doing about it? It is not reportable



in this state. I have tried to keep young people away from my cases and have succeeded fairly well for a week or two. But without recommendations by our State Board of Health, we have little authority. I believe the disease should be made reportable, and at least some recommendations made by our State Board of Health for isolation of these patients from young people.

—R—

### Drainage in Abdominal Infections

F. D. KENNEDY, M.D., Norton

Read before the Kansas Medical Society at its Annual Meeting, May 8-10, 1928, at Wichita, Kansas.

There has been considerable change in our ideas as to the use or non-use of drainage in abdominal infections in the last decade. The cause for this is a more rational knowledge of what it is possible to accomplish with a drain and also the possibilities for harm by a drain within the abdomen. In this paper we will consider just what happens when a drain is placed within the abdomen.

At the time I was taking my hospital work about fourteen years ago, it was customary to drain every abdomen in which there was the slightest suspicion of infection. An appendix with a little plastic exudate around it had a drain placed behind the caecum, another one in the pelvis and probably a third one in the kidney fossa. Also the abdomen was either left wide open or else partly pulled together with a few tension sutures. The idea was to drain as much of the abdomen as possible. And how they did drain. Usually the entire wound became infected and it took about all of one interne's time doing pus dressings. There were so many that we had to have a cart to wheel the supplies around.

At the present time, although there are fairly fixed rules as to when drainage is necessary, the actual use of it varies a great deal with different surgeons. On the one hand are those who still drain nearly every abdomen and on the other those that practically never drain an abdomen. Both of these types are probably wrong, yet on a percentage basis the men that never use a drain lose no more patients than those that drain frequently. Personally I think that

the best results will be obtained by careful consideration of the known facts in regard to abdominal drainage in relation to the condition present in each individual patient. Now what are the known facts in regard to drainage? These facts have been worked out by numerous men but were probably first called to the attention of the profession by Yates in an article in Gynecology, Surgery and Obstetrics, about 1905.

When a drain is introduced into the abdominal cavity certain results are constantly observed. There is for 12 to 24 hours a profuse discharge of a serous, slightly turbid or blood stained fluid. After that time the quantity lessens and the tube is generally removed. If the drain is kept in, however, suppuration follows the result of an almost inevitable infection. A general peritoneal infection does not occur because by this time the tube had been walled off and the pus is coming only from the drainage tract.

Warbasse says that plastic adhesions are excited in a few hours and after that the only area drained is the drainage tract. The average drain is shut off in less than a day and therefore any good that it does in the way of drainage must be accomplished before that time.

Also the irritation provoked by it causes an inflammatory infiltration of the intestinal wall and inhibits peristalsis.

According to Moynihan, if in dogs a drainage tube is placed into the peritoneal cavity and eighteen hours later a colored solution is injected into another part of the abdomen none of the solution passes out at the site of the drain even when the abdomen is filled to its utmost capacity.

Yates, after a very prolonged research into the questions, comes to the following conclusions:

Drainage of the general peritoneal cavity is physically and physiologically impossible.

The relative encapsulation of the drain is immediate.

The absolute encapsulation occurs in less than six hours.

The serous exudate is mostly an exudate due to the irritation of contiguous peritoneum by the drain.

There is a similar current inward into the abdominal cavity.

The adhesions become more fibrinous the longer the tube is left in.

Irrigation through drains in the abdomen is futile and dangerous.

Peritonitis if not too severe causes encapsulation of the drain more rapidly than normal.

A drain in the presence of infection is deleterious to peritoneal resistance and should only be introduced to exclude more malign influences.

Peritoneal drainage must be local and unless there is something to be gained by rendering an area extraperitoneal or by making from such an area a safe path of least resistance leading outside the body, there is aside from hemostasis no justification for its use.

Now with these facts in mind why should one ever use drainage within the abdomen? Probably the most frequent need for it is in those cases where it is impossible or inadvisable to remove the primary cause of the infection. This would be true in an appendiceal abscess where the appendix was not removed and in fact in about any abscess as the walls of the abscess are seldom removed and constitute a focus of infection. With drainage the abscess area may be made extraperitoneal and a safe path of least resistance made outside the body.

Another type is where there is danger of an escape of fluid as following any work on the bile ducts.

The third type is the one that calls for judgment by the surgeon in each individual case. That is where it is used for temporary drainage. In this must be considered the condition of the patient, the lapse of time since the outset, and the severity, extent and character of the infection. If it appears, after the primary source of infection has been removed and the infection mopped out as carefully as possible, that the peritoneum is so much damaged or the infection so severe that the patient cannot handle it, it probably is better to put in free drainage in the hope that even a few hours of drainage before the tube becomes encapsulated will be a benefit.

In other words, in this type of case we

figure that a drain can't do much harm and we hope it may do some good.

There is no claim for originality in this paper. I have attempted to credit the men that I borrowed the ideas from.

However in my own work the apparent futility of drainage in diffuse peritonitis has been apparent. In patients dying from this condition where I have afterwards opened the abdomen I have found free fluid in the abdomen in spite of the drains and in two cases no adhesions anywhere except around the drainage tubes.

I probably for some time yet will continue to use drainage in cases where there is frank pus within the abdomen. This however, I fear is more because I think I will sleep better for it than because it is really necessary.

—————R—————

### **The Importance of the Care of the Newly Born Infant**

FRANK C. NEFF, M.D., Kansas City, Mo.

Professor of Pediatrics, School of Medicine,  
University of Kansas.

Address before the Shawnee County Medical Society, Annual Meeting, December 5, 1927, Topeka, Kansas.

The observation of the newly born is a fascinating and useful study, rewarding anyone who gives the time to it. It is the most recent of the special developments of practice. There are only a few books in the English language written exclusively upon this subject. The most complete one is that of Von Reuss, translated from the German, which should be read by every one who takes care of young infants at birth. Another good one is the small book by Dr. John Foote of Washington.

The baby at birth becomes a very important personage, especially in these days of small families and the high cost of being born. Not only is the prenatal welfare of the infant to be watched closely by the obstetrician, but the post natal condition requires careful attention. It is time that physicians acquaint themselves with the newly born characteristics and abnormal phenomena, for it is obvious that this age group is much different from any of the others. The newly born infant deserves a physical examination and a record of its progress just as any other patient in the hospital. Not



only should untoward manifestations be early recognized, but the child should be started off properly fed and nourished. The mother too, can at this time be taught a great deal about the normal characteristics and the care of her child. As an illustration of a physiological peculiarity of early life and the mother's lack of knowledge thereof, two women have told me recently that they were worried about some blisters which the young infant had upon the lips. These proved to be nothing more than the usual thick lips with the projections on the mucous surface known as the third lip, a provision of nature to aid the infant in successful suckling.

#### THE FEEDING AND NUTRITION OF THE INFANT DURING THE FIRST TWO WEEKS OF LIFE

For the past three and one-half years, at the Kansas City General Hospital obstetrical nursery, all the breast and bottle feedings of the young infants have been measured, recorded and tabulated. There are now over 1,000 infants so observed. Our practice is much different from the previous custom of feeding the newly born only a little water during the first few days, depending entirely on the activity of the mother's breasts for the first real food. The results of this experience show that attention given to the feeding at this early period is of great help to the child, and much is done to increase the mother's yield of milk.

It is well known that many women have colostrum before the child is born. Secretion is often seen to be oozing from the nipples during labor. Colostrum is a highly nutritious and concentrated food and can be of great nutritional benefit to the child. In order to help nursing to be successful attention is paid to the nipples before and after labor. Beginning eight hours after labor is completed, in addition to nursing, the mother's nipples are stripped regularly every four hours except at 2 a. m. During the first twenty-four hours, we have found that 42 per cent of the mothers can be made to yield from one-half to six ounces of colostrum. The following selected cases show that infants may get considerable food from the mother in the first three days:

#### *Infants Getting Milk from Breasts on the First Three Days.*

| Day of Life |                | 1   | 2   | 3     |
|-------------|----------------|-----|-----|-------|
| Baby No.    | 60—Breast Milk | oz. | 4   | 8.25  |
|             | 64—            | 3.5 | 7.5 | 14.75 |
|             | 75             | 3.5 | 11. | 12.   |
|             | 87             | 2.5 | 2.5 | 5.    |

The technic which has been followed is the placing of the infant at the breast eight hours after birth, and thereafter every four hours day and night. The infant nurses only three to five minutes for the first three days and this short period helps to keep the nipples from getting sore. At no time during the newly born period is nursing longer than seven minutes. The breasts are then stripped immediately after each feeding, using the method of thumb and finger manual expression. This expressed milk is then fed to the infant, if needed. From the fourth hour onward additional food is given to make the following total amounts per feeding:

| Day of Life    | 1   | 2 | 3   | 4  | 5   | 6    | 7    | 8    | 9  | 10   |
|----------------|-----|---|-----|----|-----|------|------|------|----|------|
| Ounces         | 0.5 | 1 | 1.5 | 2  | 2.5 | 2.6  | 2.75 | 2.75 | 3  | 3.5  |
| Total received |     |   |     |    |     |      |      |      |    |      |
| in 24 hrs.     | 3.0 | 6 | 9   | 12 | 15  | 15.6 | 16.5 | 16.5 | 18 | 21.0 |

This corresponds closely to the physiological capacity of the stomach as recorded by Scammon and Doyle, and will be accompanied usually by regular gains in weight after the third day. Infants who did not gain properly during their ten-day period received the following average amounts:

| Day                | 1   | 2 | 3 | 4   | 5 | 6 | 7   | 7   | 9 | 10 |
|--------------------|-----|---|---|-----|---|---|-----|-----|---|----|
| No. oz. in 24 hrs. | 0.5 | 3 | 3 | 5.5 | 6 | 8 | 6.5 | 9.7 | 9 | 10 |

The practice of stripping all breasts furnishes considerable milk for feeding premature and other infants who would otherwise get an insufficient amount. However, it is advisable to have a simple formula of cow's milk to use as an additional food whenever breast milk is not plentiful. Newly born infants handle well artificial formulas containing the same number of calories per ounce as breast milk. During all this period we have used several types of food including both sweet and sour milk, and when fed in safe amounts as indicated above, there is no objection to mixed feeding as carefully practiced. In the Kansas Medical Journal, Volume 26, 137, 1926, I published an experience with lactic acid milk which I have found to be well borne. A

formula which contains 20 calories per ounce is the following:

|                                        |             |
|----------------------------------------|-------------|
| Boiled whole milk (cooled)             | 10 oz.      |
| U. S. P. Lactic acid                   | 20 drops    |
| Any sugar, such as cane, malt or syrup | 1 oz.       |
| Cool boiled water                      | q.s. 16 oz. |

As soon as the amount of breast milk secured at the nursings is sufficient for the infant's needs and regular gain, the artificial food is promptly discontinued. This preliminary feeding reduces the amount of the early physiological loss of weight during the first few days, and helps the infant to gain earlier, especially in cases where the mother's breasts fail to secrete the needed amounts. We try in every case to send the mother home feeding the baby successfully and exclusively on the breast.

The following table shows examples of the amounts taken in twenty-four hours and how after the breast milk becomes adequate the additional artificial food is discontinued:

weight. The following table shows the variation in the amount and time of the physiological weight loss among the infants of the various birth weight groups. We have been anxious to send all the babies home with a definite increase over the birth weight or at least having regained it. The table is an analysis of the weight changes in 678 consecutive newly born infants.

From these figures it is seen that 25 to 84.6 per cent of the infants, depending on the birth weight, had regained or exceeded their birth weight at the 12th day. In Group 2 the average time when the maximum physiological loss occurred was between the 2nd and 3rd. The average loss depends upon the birth weight, but for all the infants in Group 2 it was 5.4 ounces. Their birth weight was regained at an average of 7.5 days. In Group 1, which had not regained their birth weight at twelve days, the time of

Mixed Feeding During Early Days Only.

| Day of Life     | 1    | 2    | 3    | 4    | 5    | 6   | 7   | 8   | 9   | 10   | 11  | 12   |
|-----------------|------|------|------|------|------|-----|-----|-----|-----|------|-----|------|
| No. 53—         |      |      |      |      |      |     |     |     |     |      |     |      |
| Breast Milk—oz. | ...  | ...  | ...  | ...  | ...  | 10  | 11  | 13  | 14  | 16   | 19  | 15   |
| Formula—oz.     | 1.5  | 7.5  | 7.75 | 9    | 12   | 2.5 | ... | ... | ... | ...  | ... | ...  |
| Weight lbs.—oz. | 7-4  | 7-2  | 7-1  | 7    | 7-1  | 7-3 | 7-6 | 7-5 | 7-5 | 7-6  | 7-8 | 7-9  |
| No. 78—         |      |      |      |      |      |     |     |     |     |      |     |      |
| Breast Milk—oz. | ...  | ...  | 10   | 12   | 15   | 16  | 15  | 20  | 17  | 16   | 19  | 16   |
| Formula—oz.     | 2.25 | 4.25 | 1.75 | 1    | ...  | ... | ... | ... | ... | ...  | ... | ...  |
| Weight lbs.—oz. | 8-4  | 7-14 | 7-14 | 7-15 | 7-15 | 8   | 8   | 8   | 8-3 | 8-3  | 8-4 | 8-4  |
| No. 81—         |      |      |      |      |      |     |     |     |     |      |     |      |
| Breast Milk—oz. | ...  | ...  | 3    | 5.75 | 6    | 10  | 12  | 13  | 15  | 14   | 15  | 11   |
| Formula—oz.     | 1.5  | 3.75 | 4.25 | 1.25 | 2.75 | 1   | ... | ... | ... | ...  | ... | ...  |
| Weight lbs.—oz. | 6-7  | 6-5  | 6-4  | 6-1  | 6-5  | 6-4 | 6-5 | 6-5 | 6-6 | 6-7  | 6-8 | 6-10 |
| No. 82—         |      |      |      |      |      |     |     |     |     |      |     |      |
| Breast Milk—oz. | ...  | 3    | 8    | 13   | 14   | 15  | 14  | 13  | 17  | ...  | ... | ...  |
| Formula—oz.     | 4    | 5    | 1.25 | ...  | ...  | ... | ... | ... | ... | ...  | ... | ...  |
| Weight lbs.—oz. | 8-8  | 8-4  | 8-5  | 8-6  | 8-6  | 8-6 | 8-7 | 8-6 | 8-9 | 8-10 | ... | ...  |

We have gone over our weight figures at the hospital to determine the average day when the child has the maximum physiological loss of weight, also the day on which the child regains its birth

maximum loss was 1 day later than in the 2nd group, between the 3rd and 4th days. The average loss during this period was 8.6 oz. as compared with 5.4 oz. in Group 2.

Average Weight Changes in 678 Infants  
Ratio of Weight at Birth to that at Twelve Days.

| GROUP I<br>Below at 12 days of age |                            |                           |                                 | GROUP II<br>Above at 12 days of age |                           |                            |                                    | Percentage of<br>678 infants at<br>or above birth<br>wt on 12th day |
|------------------------------------|----------------------------|---------------------------|---------------------------------|-------------------------------------|---------------------------|----------------------------|------------------------------------|---------------------------------------------------------------------|
| Birth weight<br>Pounds             | Total<br>number<br>infants | Day of<br>maximum<br>loss | Average<br>physiol.<br>loss—oz. | Average<br>physiol.<br>loss—oz.     | Day of<br>maximum<br>loss | Total<br>number<br>infants | Day of re-<br>gaining<br>birth wt. |                                                                     |
| 3                                  | 4                          | 2.75                      | 6.5                             | 1.5                                 | 1.                        | 2                          | 7.                                 | 33.3                                                                |
| 4                                  | 2                          | 4.5                       | 8.25                            | 3.81                                | 3.27                      | 11                         | 8.72                               | 84.6                                                                |
| 5                                  | 32                         | 3.68                      | 7.09                            | 5.07                                | 2.20                      | 26                         | 7.11                               | 44.8                                                                |
| 6                                  | 56                         | 2.82                      | 7.0                             | 5.27                                | 2.38                      | 91                         | 7.25                               | 61.9                                                                |
| 7                                  | 140                        | 3.07                      | 9.09                            | 5.52                                | 2.17                      | 147                        | 7.26                               | 51.2                                                                |
| 8                                  | 70                         | 3.16                      | 8.71                            | 7.0                                 | 2.43                      | 42                         | 7.24                               | 37.5                                                                |
| 9                                  | 32                         | 2.78                      | 10.34                           | 8.20                                | 2.20                      | 15                         | 8.04                               | 31.9                                                                |
| 10                                 | 6                          | 3.66                      | 12.50                           | 7.0                                 | 2.50                      | 2                          | 7.5                                | 25.0                                                                |
| Total                              | 342                        |                           |                                 |                                     |                           | 336                        |                                    |                                                                     |
| Average                            |                            | 3.30                      | 8.68                            | 5.42                                | 2.26                      |                            | 7.51                               | 46.2                                                                |



Infants, therefore, who have their physiological loss earliest are the first to regain. Those who lose the least regain the quickest—a fact which is associated with plentiful food in these early days of life. Artificial food in conjunction with breast feeding in the first days is usually advisable, unless the mother has from the beginning abundant milk. The chief advantage in using mixed feeding from the beginning is the prevention of a pathological nutritional loss in those infants whose mothers never develop sufficient milk in the breasts. Only 2 per cent of our infants left the hospital entirely on the bottle, and in 82 per cent no bottle feeding was being used when the child was dismissed. Those who left on mixed feeding were definitely better off than they would have been if they were trying to subsist on scanty breast milk.

#### PATHOLOGICAL CONDITIONS IN THE NEWLY BORN INTERFERING WITH PROGRESS

I now wish to discuss briefly with you some of the pathological conditions in the first weeks of life which are more or less remediable, and which interfere with the normal progress of the child.

*Cerebral or Meningeal Hemorrhage*—One of the most common causes of brain injury with mental impairment and spastic paralysis is that of birth hemorrhage, the early symptoms of which may not be recognized but occur soon after birth in the first few days. Some of these cases are due to spontaneous hemorrhage, manifestation of an early hemorrhagic tendency, sometimes accompanied by bleeding in other regions of the body. It has been found that prematures and other infants who die at birth or soon after have a high percentage of hemorrhage from laceration of the tentorium and falx cerebri. Prolonged labor, abnormal presentation, breech extraction, severe instrumental delivery and other causes of trauma are usually the explanation of the hemorrhage. The infant is found to be not doing well, refusing to nurse, being stuporous, the pupils contracted, the respiration irregular, the temperature elevated. There are motor disturbances, with twitching of the eyes, face or extremities, general convulsions, increased knee jerks. If the hemorrhage is in the tentorium or above it, the fon-

tanel is tense or bulging. There may occasionally be edema of the scalp. Extensive bleeding, especially below the tentorium, may be proven by the examination of the spinal fluid which appears bloody, but as spinal puncture is difficult without piercing the rich plexus of the veins in the newly born, it is hard to prove that a bloody spinal fluid is evidence of cerebral hemorrhage.

The treatment is not very satisfactory. The infant should be given rest just as in any other hemorrhage. Sedatives for the nervous system, and in the hope that further hemorrhage may be averted, an injection into the muscles of 30 c.c. of the parent's blood. This should be done at the earliest period possible. However, the damage may be already done, and nothing gained by any treatment. The severest cases will die, others will live to be paralyzed and mentally defective, while others may completely recover. One cannot say how often residues of cerebral hemorrhagic trauma may be the cause of epileptiform convulsions in childhood.

*Atresia of the Esophagus, Duodenum or Anus*—A congenital malformation of the esophagus, duodenum or anus occurs in a small percentage of births. Lack of patency in the esophagus should be at once suspected in the infant that regurgitates all water or food given from the first day of life. I have seen three such cases. The obstruction is readily found by attempting to pass a small catheter into the esophagus, or by the administration of a small amount of barium and a roentgen picture taken. In most of these, the esophagus ends in a blind pouch, or there may be a communication with a bronchus, either from the gastric portion or from the upper segment of the esophagus. No treatment has as yet been successful.

Imperforate anus is readily observed, atresia of the rectum suggested by absence of stools. When this is uncomplicated the remedy is fairly simple, but I have known of one case where the incision and dilatation with bougie resulted in penetration of the rectal wall, peritonitis and death. Communication of the blind end of the rectum with the vagina or urethra is not very rare, and

offers much danger to the child through sepsis and much difficulty in the surgical treatment.

Vomiting in the early days is suggestive of an obstruction high in the small intestine, more often in the duodenum. Pyloric stenosis is extremely rare in the early days of life. The diagnosis of intestinal atresia can be proven by the barium radiogram, and an operation should then be undertaken, though only small defects in the duodenum can be remedied and the operation is formidable at this time of life. I have seen one report of success in the treatment of a short defect in the continuity of the duodenum and I have known one infant with a narrow duodenum and obstruction that theoretically might have been saved by gastrojejunostomy.

Atresia of the esophagus and small intestine have been mentioned simply for the sake of their diagnosis.

*Inanition or Starvation Fever*—Fever occurring in the first few days of life may be due to starvation or dehydration. It is not serious, but is important from the standpoint of differential diagnosis. Such fever appeared in 1,000 cases mentioned by Holt to have occurred at the Sloan Maternity Hospital, the symptoms subsiding after the mother's milk became abundant. We see several cases a year in any obstetrical nursery. The following chart will illustrate the small amount of fluid intake which such a case gets and the rapid disappearance of fever after fluids are increased.

| FLUID INTAKE |       |       |        |        |        |
|--------------|-------|-------|--------|--------|--------|
| Day          | 1     | 2     | 3      | 4      | 5      |
| Water        | 3 oz. | 2 oz. | 3 oz.  | 2 oz.  | 4 oz.  |
| Formula      | 2 oz. | 2 oz. | 8 oz.  | 12 oz. | 12 oz. |
| Breast       | 0     | 0     | 1½ oz. | 3 oz.  | 2 oz.  |
| Temperature  | 98.4  | 104   | 99     | 98.8   |        |

Increased fluids were begun with the high temperature on the third day, the fever disappearing within 24 hours after the free administration of fluids.

In addition to the fever the child shows evidences in the skin of being somewhat dehydrated and the loss of weight is greater than in the simple physiological starvation. The urine is scanty, but it does not contain pus or microorganisms. Starvation fever is chiefly important in calling attention to the necessity for food and water in larger quantities and for the diagnosis from pyelitis,, sepsis and cerebral hemorrhage.

*Pyelitis in the Newly Born*—When the young infant after doing well for a few days begins to vomit, to refuse nursings and to have fever, one should suspect urinary infection and make daily examinations of the freshly voided urine for microorganisms and pus cells. Pyelitis at this time of life is found almost entirely in male infants, an incidence which is entirely different from later infancy and childhood when primary pyelitis occurs almost entirely in girls. When pus is found in the urine of females of any age, the vagina should be inspected repeatedly for local infection, as the origin of the pyuria may be found there. Circumcision in the male might be the source of the infection, but this has not occurred in my experience. It is more probable that pyuria in the newly born male results from some obstruction or abnormality of the urinary tract, such as diverticulum, stricture of the ureter or anomaly of the renal pelvis. I have seen at autopsy upon an infant with pyuria, multiple or miliary abscesses of the entire kidney.

In addition to the previously mentioned symptoms, the child becomes dehydrated, has a pathological loss of weight and rapidly loses strength. The infant looks sick and toxic. Slight or severe spasms are not uncommon. It is difficult to alkalinize the urine by any amount of medicine and in many cases the infant goes steadily downward. Anuria is pronounced and the urine becomes cloudy from pus, pus casts, granular and hyalin casts. One must not mistake urates for pus, although both may be present. The total white blood count is not of much help in the newly born for it is high in normal young infants, but a differential count shows a preponderance of polymorphonuclears in the blood, a significant finding in the case of pyelitis.

*The Treatment* — Administration of water is of most importance. This should be given by the mouth both day and night, also in the form of normal salt solution by hypodermoclysis. Under the skin, 200 c.c. of solution should be given slowly, once a day and in cases of vomiting repeated at twelve-hour intervals. The intolerant stomach should be washed



out once or twice in twenty-four hours and a few ounces of salt solution left in it. Alkalinization of the urine should be attempted by oral administration of sodium citrate and bicarbonate, 5 grains each, every 4 hours day and night. If not retained by the stomach, they may be given twice daily by the rectum if retained. When results are not obtained from the alkalies, urotropin and acid sodium phosphate, or urotropin and ammonium chlorid, each  $2\frac{1}{2}$  grains every 4 hours may give success in overcoming the infection. In the newly born infant the treatment must be started at the beginning of the infection if the child is to be saved. The services of a competent trained nurse are essential.

*Otitis Media*—Otitis media readily occurs in the young infant from exposure to attendants or visitors who have acute "colds." The nursery infant should not be kept in the same ward or room with older children, nor be allowed to go to the mother who has a respiratory infection.

The diagnosis of otitis media in these infants is not always easy before the drum ruptures. Vomiting, diarrhea, lack of appetite, fever, crying, restlessness and abnormal appearance of the drums are usually present, but the local evidence of infection is sometimes missing. Examination of the ear drum should be routine when the infant is not doing well. Purulent discharge is often the first symptom which is recognized.

Incision of the drum early if possible, and drainage, and sometimes drainage of the mastoid antrum are necessary.

The infant who may have been thriving on its food but who develops a gastrointestinal disturbance deserves a careful examination of the ear.

*Epidemic Pemphigus (impetigo) in the Newly Born*—The scourge of the hospital nursery is the occasional epidemic of pemphigus. Few obstetrical nurseries have escaped, and in one institution that I know by reputation only, few infants for the past six months have escaped infection. The first case may be due to exposure to a mother with furunculosis or other suppurating lesion, or it may possibly arise primarily in the infant from lowered resistance locally in the cutan-

eous irritation of the diaper region, or in the warm moist regions of the axillae or fatty folds of the neck. Prevention of transmission to others is difficult and the epidemic may involve all of the infants in the nursery for months. Even though the lesions are usually mild and cause little disturbance to the infant, the presence of such an infection in the hospital is embarrassing, and creates much resentment among the mothers, especially as the child is apt to go home with the disease and may require some time before getting well. I have seen one case die in a few days from generalized epidemic pemphigus and some others have had abscesses and invalidism for long periods.

The treatment is both prophylactic and curative. At the General Hospital every infant is carefully inspected each day, so that a first vesicle can be at once treated and the child completely isolated. The isolation should be as strict as for any other contagious disease. Epidemics have been prevented by attention to the first lesion that appears and strict asepsis in the exclusion of the child. I have tried ammoniated mercury, gentian violet, mercurochrome, and other remedies, but at the hospital we have for two years used the following method successfully: Scrub the lesion with soap and water, rubbing off the top of the vesicle. Then touch the lesions twice daily with Milian's lotion:

|                       |          |
|-----------------------|----------|
| Brilliant Green ..... | 0.05 gm. |
| Crystal Violet .....  | 0.05 gm. |
| Alcohol (90%) .....   | 30 gm.   |

*Engorgement of the Breasts of the Newly Born*—Enlargement of the breast and the presence of a few drops of milk occur in all full term infants during the newly born period. The enlargement of the breasts is physiological and is activated by the mother's milk most probably. If the breasts are manipulated or squeezed mastitis easily results, and infection through the nipple with abscess may result. I mention this as an unnecessary meddlesome practice which uninformed nurses or attendants may be guilty of. The uninjured, though swollen, breasts of the infant should be let alone, except for gentle bathing. The attendant's fingers should be kept away

strictly. If infection occur, mild antiseptic compresses and a bandage, and for abscess simple drainage, should be the rule.

*Tongue-Tie*—It may be that I have developed a complex about the necessity for leaving tongue-tie strictly alone. One infant whose frenum was clipped died of hemorrhage in spite of all the resources of a good hospital, and medical history furnishes many instances of death from hemorrhage and infection following meddlesome clipping of the frenum at the hands of midwives. If you wish to read something on the subject get the small book of Butlin and Spencer, published in England 25 years ago. Those observers report many disastrous experiences with hemorrhage, cicatrization and interference with function, and the uselessness of clipping the frenum. Tongue-tie, according to Von Reuss in his book on the New Born, does not cause difficulty in nursing and this has been my observation. It disappears as the tip of the tongue grows longer and away from the insertion of the frenum later in childhood. No adult so far as I know has ever had persistent tongue-tie. Clipping may cause a stripping of the frenum clear down into the ranine artery and vein, permitting hemorrhage which can only with difficulty be stopped.

*Conjunctivitis, Vaginitis and Proctitis*—Gonorrheal vaginitis may occur from infection from the mother and should be guarded against by cleansing of the vulva at birth and instillation of silver nitrate, a rule which we follow at the General Hospital as regularly as the antiseptic is instilled into the conjunctival sac. I cannot now go into the details of the treatment. Each infant in the nursery should have an individual thermometer, as both vaginitis and gonorrheal proctitis have been spread in institutions by the common thermometer.

In conclusion I wish to express my appreciation of your close attention to a subject which I have tried to make interesting to all of you, no matter what your special line of practice may be.

—R—

#### **Pertussis Bacillus Vaccine**

Vaccine made from stock cultures has been used with a great variety of success. Certainly as used it does not pre-

vent all cases, nor does it cure a great percentage of those who have contracted the disease. Its use is not harmful so far as we know and the reactions are slight, if any. For this reason it may seem desirable at times to use them even though results may not be encouraging. (J.A.M.A., Nov. 3, '28.)

—R—

#### **A Premature Pronouncement of Dissolution**

ROLAND G. BREUER, M.D., Haddam, Kans.

Some twenty years ago it was noted that the Country Doctor was rapidly dying out. Today it is still being noted that he is rapidly dying out. During this generation his eulogies and obituaries have periodically appeared in journals of medical interest, from the Supreme Oracle to the cheapest advertising pamphlet which continually clutters the physician's mailbox. Interested organizations bemoan his plight and proffer suggestions for arresting his demise and restoring his vanished prestige. Most concerned of all seem to be the statisticians, who for years have had the poor devil practically "extincted" along with the dodo and the ichthyosaurus.

Of course, statisticians, like taxes and motorcycle-cops, are a necessary evil of our civilization. And as long as they shuffle their sheaves of figures dealing only with ordinary things, like war and divorce and morality, they may be indulgently regarded as harmless souls trying to make an honest living. But when they commence to aim their broadsides against a creature as vital to the welfare of humanity as the Country Doctor, they become fair game as a nuisance.

Some fifteen years or so ago the writer became aware of the concern over the demise of the country doctor. As the son of one of them, he was preparing to enter the study of medicine, and he felt justly sorry for this vanishing race. For ten years the death-struggle continued, and still the old cuss out in the rural districts seemed to be holding his own, while his charges continued to be born, live, work and die quite efficiently, unconscious of their sorry plight and happy withal. It was strange that this use-



less relic took so long to totter into oblivion. So strange was it that the writer, shortly out of medical school, could not get it out of his mind and decided to look into the enigma. Something seemed to be keeping this expiring fossil alive, and he set out to find it. For six years he sought this thing and studied the country doctor from near and afar—as a city practitioner, as a director in a large medical institution, as the editor of a magazine, and finally as a country hack himself. And he believes that these studies have shown him the thing which has prolonged the existence of the country doctor and which will continue to prolong it for an indefinite time to come.

As a climax to nearly six years of research along this line, circumstances placed the writer in the midst of a country practice—a little village of less than 400 souls out on the plains of Kansas. Here he has plied his profession every day—and a good many nights. A six months' pilgrimage through Ohio, Indiana, Illinois, Kansas, Nebraska, Colorado, Utah, Nevada, Texas, Arizona and California demonstrated the fact that this locality is typical of any country practice. While in search of the pot of gold at the foot of the rainbow, he found the circumstances of the country practitioners everywhere to be monotonously identical. Where one locality was better in some respects, it again lacked in others.

The territory medically tributary to this typical Kansas locality extends six miles north, fifteen miles south, four miles east, and six miles west of the village—some 200 square miles in all. Not a road is paved or graveled, and in wet weather they run up and down the hills as streaks of bottomless mud. The people, numbering around about a thousand, are typical country folk—no more or no less superstitious or warm-hearted than anywhere else. As to competition there is a physician eleven miles north, one twelve miles west, one fourteen miles northwest, one twenty miles southwest, two twenty miles due south, and one nine miles due east. Three of them are past fifty years of age, one or two in their forties, and the rest, including the writer,

in their thirties; they have practiced in their respective locations anywhere from one to thirty years. No family in this territory, therefore, is further than ten miles from a physician who, with his powerful automobile, can reach a patient in less time than an ambulance can buck city traffic and reach its destination.

The type of work done by these practitioners is on a par with that done by their brethren in the city. Of course, they cannot compete with the foremost of city specialists in major surgery, intricate diagnostic procedures that require bulky, expensive and time-consuming apparatus, or in specialized x-ray therapy, etc. Luckily, the absolute need for such procedures in an outlying practice is relatively small, and when it does become evident, it is referred to the men in the cities. Since the bulk of the practice requires getting the complete "low-down" on a case—from family skeletons to the brand of tobacco chewed—the country doctor reigns supreme.

The medical equipment of these men is surprisingly good. Their atelier is not housed in a majestic pile of steel and masonry or approached by zooming elevators and tiled halls. But in it one sees a microscope, electro-diagnostic instruments, x-ray and physical-therapy apparatus, up-to-date medical books, and a complete drug stock. One comes to realize that the newest aspects of medical and surgical endeavor are no mysteries to this prairie sage, even though he may not go batty over all of them and refuse to employ them until usage has voted them sound. Incontrovertibly the fact is brought home to the observer that the percentage of relief and cures of this man is fully as high as that of his city brother—even higher when one fully realizes the vast variety of conditions which he must treat upon his own initiative and resources.

Surgical practice is similarly well disposed of. Although the hospital be 40 miles away, physician and patient always reach there. As a result of better ability and equipment in centralized hospitals, earlier insistence upon going there, and better transportation facilities, fewer surgical cases are lost or "bobbled" to-

day than there were twenty years ago. There is, however, in the opinion of the writer, more minor surgery done in the country today than in the general practice of a city, for, when accidents happen in the isolated farmhouse, the patient cannot be indiscriminately hauled "just around the corner to the new and shining hospital." The local healer must himself attend to many borderline cases that in the city would be palmed off onto the emergency hospital, the general hospital, or the industrial surgeon.

Obstetrics, likewise, seem to bud and blossom with the same verve as of yore. Asepsis, forceps deliveries, and adequate postpartum care are all practiced successfully. And, taking it by and large, the average mother in the country is a better risk than in the city because of better natural sanitation, better resistance to pain and infection, and more reserve strength in the broad-hipped physiques of the hard-working women.

Preventive medicine is on a peculiarly efficient basis in these outlying districts. The rustic medico cannot call on a powerful health-board or hard-boiled police force to fight his battles for him. He must attain his ends by appeal to common-sense, by diplomatic cajolery, by working on the taboos and superstitions of his charges, or by the force of his own personality. Success crowns his efforts as well as it does those of others. Where does the greatest incidence of filth-diseases occur: typhoid fever, infant digestive disorders, etc.,—in the thickly populated or in the rural communities?

Of course, there are off-color horses in every herd; there are occasionally crooks and charlatans among the country practitioners. But, go you up and down the side-streets of any city of half-a-million population. Comb the sancta of all who claim to be healers, and you will be sickened by the droves of crooks, vice-mongers, liars and cheats, and inefficients who perpetrate any amount of mephistophelian charlatany upon a suffering, gullible public. Contrast this with the average status of the rustic healer, whose life is an open book to each and every one of his flock and whose efforts are the entertainment, the gossip, and

the pattern of the countryside. In what localities do most of the medical license revocations come—the country or the city? Whence come the most convictions for criminal malpractice—the corn-row or the avenue?

These country doctors are men whose rugged bodies and brusque manners conceal hearts of the most tender humanity and the deepest understanding. Their hours are not spent in stuffy palaces which are crowded with the softest comforts of ease, but are eaten up by long, hard drives over wind-swept, snow-obliterated, rain-sodden roads on errands of mercy, often when they know that the recipient of their ministrations has not a cent with which to reward them. Instead of softly-lighted rooms and the tinkly laughter of exquisitely-gowned women as an accompaniment to evenings of bridge or the theater, they spend a howling night at the bedside of some vociferous country lass who is presenting her temporarily-repentant spouse with the first fruits of matrimony. Or by the pallet of some flushed, dry-eyed tot who battles the scourge of illness in an ill-ventilated farmhouse, while the anxious parents place a trust in this rustic healer that is next only to their God.

Hard men, and resourceful, and kind and sympathetic they are—and they love humanity in a way that no city practitioner can ever realize. Are they dying out—can they ever die out as long as there is a country locality? Never. Then why this foolish furor about their demise? Why are solicitious organizations and statisticians wringing their hands over a phantasmagorial conception?

And a phantasmagorial conception it is. Statisticians base their mental gymnastics upon figures which they glean from various and diverse sources. In regard to the country doctor, the figures set forth a lot of "pooh-bah." They reinforce deductions drawn from these figures by reading letters from ambitious cross-road druggists who wish to plant a medico in the back room of the drug emporium and fatten off the prescriptions written by him. Or from some self-made leading business man who has



a grudge against the "doc" from the next town and wishes to even up scores by "gittin' a doc of our own, by heck." The delvers in numerals "see by the paper" that Dingbat County has only seventeen doctors instead of twenty-six in bygone days; that Mudville supports only one physician against three in 1896; that Coclebur Flat has no doctor since the old died and must employ the "young feller" from nine miles distant. So they sweat and stew and fill the medical literature with their dire forebodings. Their tearful propaganda riles up the whole profession from the Dean of the medical college to the country doctor himself, who, believing everything that is printed in medical journals, prepares to attend his own wake, if he can "dammit find the time."

But were these harbingers of grief to come to dry their tears, put aside their rows of figures, and sally forth for a little first-hand information, they would receive the shock of their statistical careers. Among several things that they would learn, these would be outstanding: First, that statistics on paper and actual live conditions are vastly different—that what appears a doleful black on paper may be in actuality a rosy glow. Second, that while in numbers the country doctor is much less than before, he stands less chance of being thrown into the discard as is the noble profession of figure-juggling.

They would find that the people of the outlying districts today get much better, more prompt, and more efficient care than they ever did in the days of the goatee and the one hoss shay. That fewer patients die as a result of surgery today when it is done in a well-equipped hospital forty or fifty miles distant than when necessity compelled the country practitioner to have his own tiny, inefficient surgical cubby-hole or to carry on in the farm-house. That there are fewer deaths from obstetrical conditions and infectious disease than ever before. They would note that the patients of the country hack, in this day of the high-powered automobile and good roads, get efficient care more promptly than does an emergency case in the big city. They would

see the country doctor, young as well as old, minus his frock coat and hirsute ornamentation, up on the latest "dope" and "driving like hell" in his car when necessary—playing golf during snatched leisure moments—a "pretty good sort of a bird" all around.

And then, in time, after the scales of ignorance had fallen from eyes accustomed only to figures, and the spirits of the seekers were contrite, they would see a wonderful factor at work throughout it all—a factor that is functioning smoothly, potently, justly, and as inexorably as the Laws of the Medes and the Persians. This factor they would come to recognize as the old one of the Law of Demand and Supply.

In the old days there was a physician at every crossroads because he was necessary. Poor transportation facilities—the horse, bad roads and poor communications—made it imperative that there be one physician to a much smaller unit of country territory than today. A physician can serve a much larger area today with less physical exhaustion simply because, in an automobile traveling 40 miles an hour along good roads, he can call on four times as many people in less than half the time than when the Old Gray Mare trundled him along at the rate of eight miles an hour along boggy, churned-up streaks of mud which ambitiously aspired to the name of roads. Under the latter conditions, more time and energy were consumed in traveling the five-mile stretches between cases than in actually attending them. As a result, the country practitioner's income is correspondingly larger, and he has more time and means to keep up on advances in his profession through attending medical meetings, reading of journals, etc. Furthermore, because of higher requirements of premedical education and better medical training, he can today make a diagnosis more quickly, and with better therapeutic equipment and apparatus, can treat or cure the patient more easily and rapidly in most instances.

After all, then, it would become indubitably evident that there are not more country doctors today because the pres-

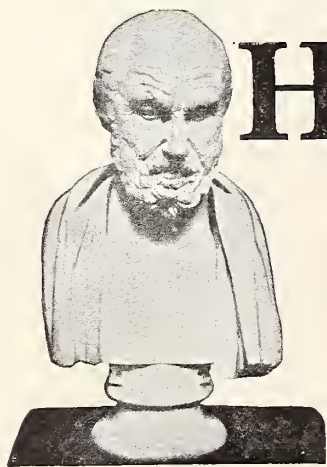
ent supply is adequate to the demand. Those at hand carry on the profession more quickly, more promptly, and more efficiently than ever before. And they are the cream of Medical Men—more rugged, more tempered with responsibility, and possessed of a wider sympathy and understanding. For their bodies are made lean and hard by long hours of work, severe climatic and natural environment, and the lack of the softening conveniences of city civilization; their natures are softened by close personal touch with the unaffected children of the soil and steeled by severe, nerve-racking initiative.

Although their numbers will continue to shrink as better transportation facilities widen individual territories, they will not die out. They stand in no more danger of becoming extinct than do the American family or the traditions of our forefathers. They are a part of the fiber of the country—as much a part as birth and love and sickness and death. They cannot die out as long as the crossroad is inhabited.

And so, ye statisticians and reformers, cease worrying about us country hacks. We were here before you. In fact, we brought you in our grips as wriggling, tomato-colored mites of humanity. Forego your worries and your proffers of aid. We will settle our own destinies to the satisfaction of all concerned. And, when the last statistician closes his eyes in that long, long sleep from which none ever awakes, the finger of one of us will count his fading pulse-beats to silence.

—R—

## TUBERCULOSIS ABSTRACTS



### HIPPOCRATES

**H** wrote many medical aphorisms, which like Gee's clinical aphorisms are well known. Always concise in presentation, these aphorisms lead to thought, arouse discussion, or foster healthy disa-

greement. This, Lawrason Brown states, was his desire when his own "Tuberculosis Theses" were published in complete form a decade ago. Today they epitomize what the average physician finds from his experience, and, colored no doubt by the experience of many men, they serve as his guide for action. Because they do serve "as a guide for action," they are presented here in part:

### Diagnostic Theses

1. An appearance of ruddy health does not exclude tuberculosis.
2. Prolonged and intimate exposure at any time of life, but especially in childhood, is vastly more important in diagnosis than "un-associated" or "non-contact" heredity.
3. Constitutional or general symptoms lead toward the diagnosis of tuberculosis, while the localizing symptoms point out the organs involved.
4. The history or presence of certain complications, as fistula in ano, pleurisy, adenitis, a discharging ear coming on painlessly, are all strongly suggestive of tuberculosis.
5. Pleurisy with effusion, not attributable to other causes, should be treated for a time as due to tuberculosis.
6. A diagnosis, tentative at least, must be made whenever an individual spits a dram or more of blood that cannot be proved to be due to other causes (e. g. mitral stenosis.)
7. Symptoms indicate that a patient is sick, while physical signs point out only the mischief that has been done.
8. Symptoms without physical signs demand treatment, while physical signs without symptoms require often only careful watching.
9. Absence of tubercle bacilli in the sputum means only that bronchial ulceration has not occurred.
10. Auscultation is more important than inspection, and the detection of rales by the auscultation of the inspiration following cough is the most important procedure in the detection of physical signs of early pulmonary tuberculosis.



11. Localized rales at the apex are second in importance only to tubercle bacilli in the sputum.

12. The disease is practically always more extensive than the physical signs indicate.

13. Abnormal physical signs in one apex should be considered as due to pulmonary tuberculosis until proved not to be, while those at the base should be looked on as non-tuberculous until definitely proved so.

14. The fluoroscope, the Roentgenogram and particularly stereograms may reveal and locate pathological pulmonary changes to be detected by no other means.

15. Extensive "peribronchial" changes in stereograms may occur with slight or no physical signs, while parenchymatous changes are usually accompanied by abnormal pulmonary sounds.

#### Prognostic Theses

1. Puberty and the menopause have less bearing upon the disease than pregnancy; especially repeated, frequent pregnancies, and hence marriage for women increases the uncertainties.

2. The mentality and characteristics of the patient's family, their ability and willingness to help in his recovery by self-sacrifice over long periods of time, are most important.

ed by sudden great effort and so makes his living with least exertion and worry, avoids relapse most often.

4. Recovery in a climate in which a patient is to live, especially if accomplished at home, bespeaks greater longevity than immediate change of climate on arrest of disease. Climate may be only a minor factor in this effect.

5. An acute onset with extensive physical signs or with severe and protracted symptoms points to a prolonged illness or an early fatal termination.

6. The continuous gain of weight on an ordinary diet is the best indication of favorable progress but can occur with advancing disease.

7. Digestion is the keystone of the prognostic arch.

8. Fever is the best sign of progressive disease and its chances of disappearance are inversely proportional to the length of time it has persisted.

9. Persistent high temperature under appropriate treatment, with slight physical signs, is grave.

10. The pulse rate, together with the temperature and weight, forms the prognostic triad.

11. Uncontrollable excessive cough is the worst form of over-exercise and favors a quick deterioration of the bodily resistance.

12. Physical signs tell by inference what has happened in the lungs, symptoms what is happening. The general condition is more important than the physical signs or the history.

13. Extent of disease marks the time element; intensity the acuteness.

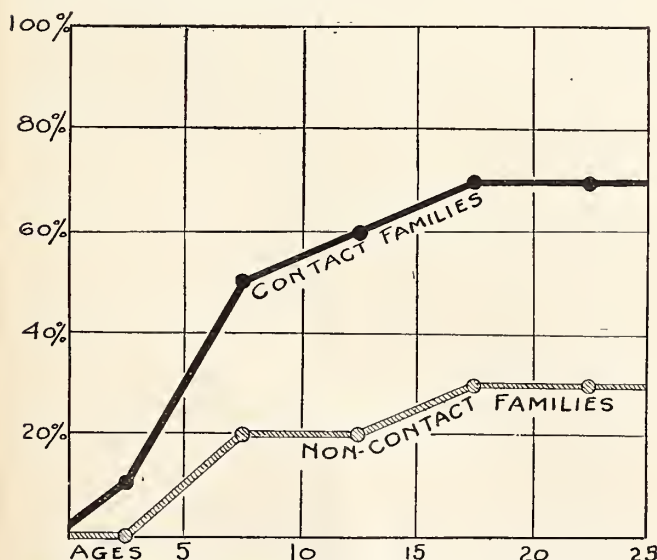
14. Improvement and even arrest may occur without change in physical signs.

15. Tubercle bacilli in the sputum indicate bronchial ulceration, and the larger the number, possibly the greater or more acute the ulceration, but enormous masses may occur in favorable cases.

16. Duration of treatment of less than three months is of little permanent help, while three or four years of treatment may complete an arrest.

#### Therapeutic Theses

1. The treatment of pulmonary tuberculosis demands little knowledge of drugs



Tuberculosis Lesions in Children of Contact and Non-contact Families, According to Age Groups (Opie and McPhedran).

3. He who returns to his former occupation when congenial and not complicat-

but much about the immediate and *prolonged* education of the patient.

2. The marked tendency to temporary arrest or quiescence, even in advanced stages, rests upon the brow of the tuberculous evil-doer like the curse of Cain.

3. The danger time in tuberculosis, the periods of the "false convalescence" of Laennec, cannot be over-emphasized.

4. The time allotted to treatment is usually too short, for recovery is ever longer than onset. The value (possibly the results) of treatment increases as the square of the time; that is, two years are four times as valuable as one.

5. At home and abroad, in the desert or on the ocean, in the lowlands or upon the mountains, patients may recover anywhere and everywhere, for it matters less where than how they live.

6. The sanatorium, the best place in which to treat patients in large numbers, has shown that permanent arrest may follow effectual treatment; the hospital has afforded evidence that direct contagion may in part be controlled, while the dispensary has become the advanced attacking line, so to speak, that carries the warfare into the enemy's camp.

7. The length of stay in these institutions depends upon the object to be attained: for permanent recovery, two or three years; for quiescence, at least three months; for prevention of infection from far advanced cases, as much as possible of the time between admission and death.

8. Remember that too much food may, in the end, prove as disastrous as too little food.

9. Exercise should be regarded as a powerful and dangerous medicine.

10. Since the vast majority of patients must seek treatment only in the climate in which they contract the disease, the so-called climatic treatment is of importance to hardly more than 5 per cent of all patients.—Tuberculosis Theses, Lawrason Brown, M.D.

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### Primary Neoplasms of Heart

Ernest B. Bradley and Elmer S. Maxwell, Lexington, Ky. (J.A.M.A., Nov. 3, 1928), report a case of primary rhabdomyosarcoma of the heart in an adult with metastases in the myocardium of

the septum and left ventricle. Two papillary muscles in the left ventricle contained tumor nodules and in one the endocardium was destroyed; the tumor cells were separated from the blood stream by a thin fibrinous covering. Both lungs showed numerous metastatic nodules, none of which measured more than 10 mm. in diameter. The esophagus and bronchi were apparently normal. The liver and both kidneys presented a few small tumors. The gastrointestinal tract, the pancreas and the retroperitoneal glands were not unusual. The pelvic organs were apparently normal. Permission to examine the brain was not obtained.

—————R—————

## UNIVERSITY OF KANSAS CLINICS

### Benefits of Insulin in the Surgery of Diabetics

Surgical Clinic of DR. THOMAS G. ORR

Paper read by Student—D. H. Davis

Treves, in his System of Surgery, published in 1896, wrote that "diabetes offers a serious bar to any kind of operation, and injuries involving open wounds with hemorrhage, or damage to the blood vessels are exceedingly grave in the subjects of this disease. A wound in a diabetic patient will probably not heal, while the tissues appear to offer the most favorable soil for the development of putrefactive and pyogenic bacteria. The wound gapes, suppurates and sloughs. Gangrene very readily follows an injury in diabetics, and such patients show a terrible proneness to a low form of erysipelas and cellulitis."

In my reading for this paper, I found an article which quoted these words of Allen: "America has reversed the old European rule that surgery on patients with diabetes should be avoided as far as possible." His statement draws the line definitely between the attitudes of surgeons before and after the advent of insulin in the pre and post-operative treatment of patients whose condition is complicated by diabetes. One author<sup>1</sup> states, that at present with insulin and medical supervision the operative risk in diabetic patients does not appear to be greater than in non-diabetics.



One may well ask what has caused these changes of attitude. Wilder and Adams<sup>1</sup> state "that the operative mortality in diabetes at the Mayo clinic has been about 7 per cent, but that during the last two years (1925) 327 operations were performed on 251 diabetic patients with only 1.2 per cent of deaths." The authors believe that the reduction in mortality is due to the assistance of the internist who has become part of the surgical team. In a New York Hospital, where emergency cases were handled, the death rate dropped from 40 to 12 per cent the first year after the introduction of insulin.

Ether is contra-indicated in diabetic patients, because it increases the sugar and lowers the CO<sub>2</sub> content of the blood. In a series of case histories in one article<sup>1</sup> there appears the history of a forty-one year old woman who was operated upon twice for femoral hernia. She was made sugar free by diet before the first operation and treated post-operatively with insulin and glucose. The operation lasted one hour, and was done under a local anesthetic. Nevertheless, her blood sugar rose to 270 mgs. and the CO<sub>2</sub> combining power dropped to 24 volumes per cent. The second operation occurred one year later, lasted 90 min., and was done under an ether anesthetic. Glucose and insulin were given before the operation. The blood sugar rose to only 190 mgs. and the carbon dioxide combining power dropped to 41 volumes per cent following the operation. Although the later operation took longer and was done with a less desirable anesthetic, the blood sugar remained lower and the accompanying acidosis was not so great. This case shows that insulin properly administered tends to prevent a hyperglycemia and acidosis.

Acidosis is much to be feared. In an English article<sup>2</sup> there appeared the statement that the great majority of the American School take the view that it is essential to make the urine sugar free and the blood sugar normal before operation. He agrees that this does no harm, but believes that the Americans are missing the essential point which is to prevent acidosis. In fact he says

that he does not know any harm that can come from some sugar in the urine and an increase in blood sugar. In another English publication<sup>3</sup> we find the statement that infection and an ill-balanced diet constitute the chief dangers of diabetes. To substantiate that the ill-balanced diet is one of the chief factors, he stated that when diabetes is diagnosed in many people they are placed on a diet over-balanced with fat which results in coma. Sixty-six per cent of the deaths in Joslin's and 58 per cent in Von Noorden's clinic<sup>3</sup>, up to 1915, were due to coma. With the introduction of insulin coma has become avoidable in practically every case. Consequently, infections are the chief cause of death at the present time in diabetics.

Infection may be classified as general and local. The general infections are problems for the internist and will not be considered here. Local infections are surgical problems in most cases. Diabetics are especially subject to boils. Reasons for this are given in the following quotation<sup>3</sup>, "The dry non-perspiring skin of diabetes requires special consideration as it contributes largely to the pruritis, eczema, and furunculosis to which diabetics are prone. An almost forgotten piece of research was published by Rosenfeld (of Bresleau)<sup>3</sup> in 1906. He showed that by reducing the carbohydrate intake of healthy students the daily excretion of their skin fat could be brought to the same low level as that of a diabetic; and in this condition the hair follicles were made excessively susceptible to staphylococcic infection. The addition of fat to the diet did not increase the skin fat; the addition of carbohydrates immediately caused it to rise to normal, and therewith the skin became much more difficult to infect when cultures of staphylococci were rubbed into it. One lesson to be learned from this is to examine the blood sugar of all persons liable to boils; another is never to trust to the fasting treatment to cure the furunculosis of a diabetic. So long as a diabetic is not receiving enough insulin to metabolize such an amount of carbohydrate as will render his skin perceptibly greasy, he will not

be cured of the tendency to boils." The same author has the following to say of surgery in diabetic gangrene. "Without insulin surgical intervention may do no good; with insulin treatment it may prove unnecessary; if insulin alone is not sufficient to check the progress of the gangrene it will contribute wonderfully to the success of an operation."

J. A. Nixon<sup>3</sup> quotes Joslin as having remarked that the complaints of diabetics today are one-quarter surgical, and if surgical delays are dangerous in ordinary circumstances, in diabetics they are disastrous. According to Nixon the two complications to be feared are sepsis and coma, either one of which can be overcome by the proper use of insulin. Many diabetics who live ordinarily by dietary measures alone may need insulin to carry them through the crisis of an operation. The insulin treatment in deliberate operations is comparatively simple, but in emergency operations the treatment is more difficult. In emergency operations where acetone bodies are absent from a urine containing sugar, Nixon recommends that 20 units of insulin be administered routinely before the anesthetic is given. He overcomes the objections that might be raised for not determining the blood sugar by stating that renal glycosuria can usually be distinguished from diabetes mellitus by the history of the lack of thirst, polyuria, and either obesity or emaciation. Besides the probability of encountering renal glycosuria is not great. Glucose solution should always be on hand to administer in case the insulin produces hypoglycemia. He states that hypoglycemia is a less evil than an operation on a diabetic without insulin. Nixon further states that it is carbohydrate that the post-operative case of diabetes needs; "I give insulin so that the carbohydrate may be utilized, checking the intake of carbohydrates and the blood sugar to insure the patient is profiting by the carbohydrates. This I believe is the secret of making surgery safe for diabetics."

A former student of Dr. Joslin's<sup>4</sup> quotes these remarks of his; "Serious infections occurred with several patients and in these insulin was of no avail. It

has been recognized that the urine would not become sugar-free in the presence of an infection, even with insulin in liberal doses; and when dealing with infections a rigorous attempt should not be made to get the patient sugar-free either before or after the operation. This is seldom possible and even if attained, is secured at too great a loss of body tissue." This author says that it is important to decide (first) "whether the metabolic derangement induced by infection in some cases is really so profound as to render it impossible to make the blood-sugar normal by means of insulin, or whether, on the contrary, insulin in sufficiently large and properly distributed doses might not, in all cases, accomplish that result; and (second), on the assumption that it is possible, whether it is all-important or not, to attain absolute sugar freedom in urine or even a quite normal blood-sugar level in cases of surgical infection in diabetic patients." Dr. Joslin's opinions were based on a case of each of the following: spinal meningitis, erysipelas, septicemia and a carbuncle. In the treatment of these 80 units of insulin per day was the greatest amount used. This dosage did not affect the cases perceptibly, but the writer of the paper could see no reason why larger doses might not do some good. In his series of patients there was one who was operated upon for a carbuncle and who received 180 units of insulin in seven injections in a period of 21 hours. This quantity did not relieve the glycosuria or the acidosis. Finally, when 246 units were given in 31 hours, during which time no food was given, the urine became sugar-free except a trace in scattered samples. To keep the urine sugar-free and give the patient a maintaining diet 200 units in 8 doses per day were necessary for one week. At the end of this time decreasing doses were sufficient. Three months later the wound healed and the urine remained free of sugar without the use of insulin. It seems possible that this patient might have died in coma, if Joslin's advice had been followed. This case also shows the great decrease of sugar tolerance that comes with an infection.



The second point, based on the assumption that it is possible to reduce the blood-sugar to normal, is whether it is all-important or not to attain absolute sugar freedom in urine or even a quite normal blood-sugar level in cases of surgical infection in diabetic patients. The case of a woman with a large surgical wound which would not heal is to the point<sup>4</sup>. Her blood-sugar was only 140 mgs. 3 hours after ingestion of 200 cc of milk and only traces of sugar could be found in the urine. After giving insulin the blood-sugar dropped to 95 mgs. and the wound began to granulate. This indicates that it is essential in some cases to get patients free of excess sugar.

If all I read is true, we can come to these conclusions:

1. Surgery in diabetics has been made almost as safe as surgery in non-diabetics by the use of insulin.

2. Insulin prevents post-operative acidosis and consequently coma.

3. By use of insulin the blood-sugar can be reduced to normal in cases complicated by an infection, although it may take exceedingly larger doses.

4. The condition of the skin is benefited to such a degree that boils and indolent wounds heal normally.

#### COMMENTS BY DR. ORR

As students you will probably acquire the idea that diabetes is chiefly a medical problem. While this is very largely true you must definitely recognize the importance of this disease from the surgical standpoint. Infections in a diabetic should always be looked upon as more serious than in the non-diabetic. When you are called upon to treat certain types of infection and gangrene, you should at once learn whether or not the condition is associated with a hyperglycemia. To treat a patient with diabetes for an infection without discovering the diabetes is likely to prove a serious error.

The introduction of insulin has been a great boon to the surgeon. Before the advent of this life saving substance the diabetic was frequently turned over to the surgeon for operation and death certificate. Today the diabetic is carefully treated by both internist and surgeon and

their combined efforts save a high percentage of those patients requiring operative treatment.

Insulin should be used with care. An overdose might prove disastrous. This danger, however, should not discourage its use or encourage operations without it. A good maxim in medicine is that the lesser of two evils should not be accepted when all evil can be eliminated.

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#### Differential Diagnosis Between Hypothyroidism and Hyposuprarenalism

The studies made by Alfred E. Koehler, Chicago (J.A.M.A., Nov. 10, 1928), suggest that much of the similarity and difference between hypothyroidism and hyposuprarenalism lies in the possibility that in the former there is a primary depression of oxidation in the tissues, while in the latter there is a secondary depression due to faulty oxygenation, probably caused by vascular and muscular atonia, which in turn is caused by an impaired autonomic system due to cortical insufficiency. With these mechanisms as a background, many bizarre clinical pictures may present themselves. The weakest structure or organ in the body is naturally the first to be affected by these glandular dysfunctions. Thus, a dry skin may for years be the first and only sign of hypothyroidism, and latter somnolence and fatigue may develop, or vice versa. Similarly, hyposuprarenalism may first manifest itself as a marked depression of the higher centers, or as a severe low back pain, or as a gastrointestinal disturbance. The difficulty so often is that these patients are treated for these specific ailments and naturally without lasting improvement, if any. The problem must always be to locate, if possible, the fundamental physiologic disturbance of which these various ailments are only symptoms. To this end, accurate and careful diagnosis must precede treatment in the endocrine field.

# THE JOURNAL

of the

## Kansas Medical Society

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**W. E. McVEY, M. D. - - Editor**

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### HOLIDAY REMINISCENCES

As the annual holiday season approaches one is likely to become reminiscent. If the Journal should write its own biography it would probably tell you something of the environment in which it first saw the light. It would tell you of its struggle for existence during its infancy, when its life was constantly in jeopardy from starvation and lack of attention, for not until it was two years old was it officially acknowledged by the Society and a guardian appointed to supervise its further growth and development. It would probably mention that from that time it thrived and with the succeeding years grew into sturdy maturity; that from an earning capacity of less than nothing it has become a going concern with a net earning capacity of more than \$2,000 a year. That in the first year of its infancy there were less than three hundred friends to whom it might extend holiday greetings, but now it wishes a Merry Christmas and a Happy New Year to more than eighteen hundred friends, associates and patrons.

### WHAT HAVE YOU DONE?

Right now every member of the Society ought to be interested in the probable fate of the Basic Science bill which will be introduced at the coming session of the legislature. Every member should be sufficiently interested to do whatever he can to insure favorable action on this bill. From returns so far received one may predict a fair support for the bill from the beginning, but that is by no means enough to justify a quiescent attitude on our part. There are still a majority of the legislators who have not been interviewed, or if they have no report has been made to the Bureau.

There has always been an impression that our legislature was likely to ignore the wishes of the medical profession in the matter of legislation, but such an opinion is not justified because the medical profession has on only very few occasions expressed its wishes to the legislature. When matters of considerable importance to us have been under discussion it was usually the fact that the members of the House and Senate had not been informed by medical men of their constituency whether they were interested in the proposed measure or not. It is possible that the fate of the Basic Science Act may not depend upon its unanimous endorsement by the members of our Society, but there can be no doubt that such endorsement will have a good deal of influence.

Such endorsement, however, can not be conveyed to the members of the legislature by resolutions or by statements of society officers. Every member of this Society should individually request his senator and his representative to support this bill, and he who fails to do so will be derelict in his duty to himself, to his brother practitioners and to the people of his community.



However, there is much more than that to be done. This proposed measure is one that the people are also very much interested in wherever its purpose has been explained to them. It has been presented for their consideration at public meetings and they have usually unanimously endorsed it. Forty-five thousand pamphlets explaining the proposed bill and its purposes have been mailed to the voters in different parts of the state and still more will yet be mailed. From what it is possible to learn, the people are very generally in favor of this kind of legislation. We must have their support if we are to succeed and the legislators must know that we have it. It will not be possible to get a very large number of people to write to their representatives and senators, as it is to be hoped the doctors will do, but their wishes can be communicated in other ways.

It was with this idea in view that blank petitions were sent out to every member of the Society with the request that they each secure at least one-hundred signatures of voters. It did not seem that this would be a severe task or that it was asking too much of the members of the Society. This would give us 150,000 signatures and that would have quite a little weight with our law makers. Quite a few of these petitions have been filled up and returned to us. It is almost a universal comment that no one refused to sign. That would indicate that the failure to get these petitions signed is due either to the neglect or the indifference of the members. The people to whom the purposes of this bill have been explained, either by pamphlets or in public meetings will be disappointed if they do not get a chance to sign this petition. If Dr. A. asks all his patrons to sign the petition and Dr. B. in the same town doesn't mention it to his patrons, there will be some wondering and some disappointment among Dr. B.'s patients.

When the chiropractic bill was passed, a petition with ten times as many signatures as have been returned at this date was presented to the governor and that was the excuse he gave for not vetoing the bill. We were told that the governor at that time had promised that he would not permit any legislation of that kind to go through. We were very complaisant about it and excused our inactivity on the theory that if the bill should pass it would be vetoed by the governor. We should not permit ourselves to be too confident, in fact, the situation at present does not justify any confidence at all. While we are not aware of any active opposition we do not have enough votes in either house to carry it through.

The only assurance of a successful issue to this campaign lies in a united effort by the profession. One of the most prominent political leaders in the State made the statement that the doctors in Kansas could get any kind of legislation they wanted if they would get together and work for it.

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### CHIPS

The British Medical Association was established ninety-six years ago. It now has a membership of 34,000 and a revenue of 80,000 pounds.

Klein, in an article on the surgical significance of the abdominal reflexes published in *Archives of Surgery*, November, divides these reflexes into two classes: hyperesthesia, which is increased pain when the skin is pinched over a diseased organ; and the contraction reflex, which is a response to scratching the skin over a particular area. Hyperesthesia aids in diagnosing conditions in adults while contraction reflex is of value in diagnosing disease in young persons. Hyperesthesia is present in about fifty per cent of early abdominal cases, diminishing later. Contraction reflexes are absent when the peritoneum becomes involved. Rigidity of the abdominal wall, not due to intraabdominal conditions, may be ac-

accompanied by an exaggerated reflex, while that caused by inflammation of the peritoneum results in absence of this reflex. Both reflexes are unilateral and segmental. The absence of a contraction reflex in the obese and in primipara has no significance but the hyperesthesia has definite value.

Smith and Rudolph report some results in the use of sulphocyanate of sodium in cases of high blood pressure, Canadian Medical Association Journal, September. They found that in normal persons that five grains of sodium sulphocyanate in water, three times a day after meals, resulted in a fall of systolic pressure of from 15 to 30 mm Hg. in a period of one week. In seventy cases with high blood pressure various sized doses were given and it was found that two and one-half grains twice daily resulted in lowering the pressure in every case. The time required varied from eight days to two weeks. There seemed to be less effect manifested in cases with much kidney damage or arteriosclerosis, but in these the pressure was lowered. The most positive results were noted in cases of essential hyper-tension.

Trichlorethylene by inhalation appears to give excellent and lasting results in some cases of trigeminal neuralgia, according to Oljenick, Journal A.M.A., October 13. The drug has no effect in facial neuralgias other than those of trigeminal origin. The following directions for its use are given: "Pour from 20 to 25 drops of the drug on a small piece of gauze and inhale through the nose until the odor has disappeared completely. Take care not to touch the nose with the liquid medicament. It should be taken three times a day." It seems that this drug has an elective affinity for the fifth nerve and the sensitiveness of the irritated nerve decreases after repeated inhalations. Sometimes giddiness and unconsciousness are caused and the drug should only be inhaled while the patient is in a recumbent position.

In a paper by Musser on cardiac disease and in one by Smith on cardiac failure, both published in the Journal of the American Medical Association, October

27, theophyllin is mentioned as being of particular value in cases of cardiac pain especially when it is associated with hyper-tension. Theophyllin belongs to the group containing caffein and theobromine. It is a diuretic and heart stimulant. It is particularly desirable in these cases, however, on account of the fact that it causes dilatation of the coronary arteries. Theophylline ethelenediamine seems to be the preparation of choice and this is given in doses of two or three grains after meals. This compound is manufactured under the trade name euphyllin.

## SOCIETIES

### SHAWNEE COUNTY SOCIETY

The Shawnee County Medical Society met in regular session at the State Hospital, Monday evening, November 5. The following program was presented:

Dr. Doyne—Drug Addiction and its Treatment.

Dr. Schaffer—Psychosis with Multiple Neuritis—(Case presentation.)

Dr. Chapman—Psychoneurosis—(Case report.)

### CLAY COUNTY SOCIETY

A very successful meeting of the Clay County Medical Society was held at the Clay Center Hospital, Wednesday evening, November 21, 1928. Practically every doctor of the county was present. Doctors from other counties were: Doctors Colt and Colt, Schoonhoven and Reitzel of Manhattan, and Doctors Carr and Smiley of Junction City.

The program which was an especially strong one was as follows: "Thyroid Disease and Thyroid Heart" with lantern slides and electro-cardiograms," Dr. Robert C. Davis.

"Pathology of Thyroid Disease," demonstrations of specimens and other interesting pathological specimens, Dr. Ferdinand Helwig.

"Surgery of Thyroid Disease," with lantern slides and specimens, Dr. Harold P. Kuhn, all from Kansas City.

X. OLSEN, Secretary.

### WILSON COUNTY SOCIETY

The Wilson County Medical Society held its November meeting in Chanute,



November 13, 1928. The doctors from Chanute, Independence, Iola, Humboldt and Pittsburg were guests of this society.

It was held in Chanute for the convenience of Dr. Bohan, of Kansas City, who was the speaker of the evening. His address was on peptic ulcer and he went over the field of abdominal diagnosis, speaking for one hour and fifteen minutes. All present felt they were well repaid for attending.

The next meeting of the society will be held in Fredonia in December.

E. C. DUNCAN, Secretary.

#### STAFFORD COUNTY

The Stafford County Society met in Stafford Friday evening, November 2. This was another public meeting, held in the high school auditorium. The meeting was addressed by Dr. C. B. Francisco, professor of orthopedics in K. U. Medical School, on the subject, "The Communities' Obligation to the Crippled Child."

From an unknown source a report was circulated that the meeting had been postponed and that, in connection with very unfavorable weather, resulted in a small attendance. Those who braved the weather were well repaid, as the doctor's talk was entertaining as well as instructive.

He stated that crippled children, as a rule, are mentally developed beyond those of the same age who are physically perfect, that they have more lovable dispositions and are very sensitive as to their defects, striving to conceal them and to act as though they were of no consequence. His experience led him to conclude that crippled children who carried their deformities through life were handicapped in every avenue of endeavor. All employers of labor hesitate to accept cripples.

The great majority of cripples, and particularly the congenital ones, can receive marked benefit if treated at the proper time and in the proper manner. The treatment of cripples has its economic as well as its humanitarian side and the public should be informed of that fact.

All in all, it was a splendid lecture and we anticipate having it repeated in St. John next spring. Dr. Francisco is a Kansas boy and this section of the state is to him homeland.

Our public meetings are highly spoken of by those attending them and this society is convinced that no other means of medical propaganda can equal it.

#### DEATHS

Carmel Lonzo Davidson, Dighton, aged 48, died July 31 of carcinoma of the liver. He graduated from University of Manitoba Faculty of Medicine, Winnipeg, 1866.

Franklin P. Hatfield, Olathe, aged 66, died October 17 of fibrosis of lung following pleurisy. He graduated from Eclectic Medical Institute, Cincinnati, 1886.

J. L. B. Eager, Topeka, aged 68, died October 19 of cholelithiasis. He graduated from Kansas City Medical College, Kansas City, Mo., in 1884. He was a member of the Society. He had been on the medical staff of the Topeka State Hospital for a number of years.

DeWitt C. Tyler, Clifton, aged 78, died at St. Mary's Hospital in Kansas City, Missouri, on December 3. He graduated from Rush Medical College, Chicago, in 1884.

#### BOOKS

Neurological Examination. An exposition of tests with interpretation of signs and symptoms. By Charles A. McKendree, M.D., Associate, Department of Neurology, College of Physicians and Surgeons, Columbia University. With a foreword by Henry Alsop Riley, M.D. 12mo of 280 pages with 88 illustrations. Philadelphia and London: W. B. Saunders Company, 1928. Cloth \$3.25 net.

It is the author's purpose in this book to present a comprehensive and systematic form of examination for the central nervous system. The various tests are described and their purposes explained. Abnormal reactions are interpreted. This book should be of considerable practical value to the practitioner.

The Elements of the Science of Nutrition. By Graham Lusk, Ph. D., Sc. D., Professor of Physiology at the Cornell University, Medical College, New York City, Fourth Edition, Reset. Octavo of 844 pages. Philadelphia and London: W. B. Saunders Company, 1928. Cloth \$7.00 net.

The author has attempted to review the "scientific substratum upon which rests present day knowledge of nutrition both in health and disease." Most of the book has been revised and some additions have been made to the discussion of metabolism. From one of the outstanding authorities on nutrition this last revision should be cordially received.

Regional Anesthesia, by Gaston Labat, M.D. Clinical Professor of Surgery, University and Bellevue Hospital Medical College, New York City, Laureate of the Faculty of Sciences, University of Montpellier; Laureate of the Faculty of Medicine, University of Paris; Formerly Special Lecturer on Regional Anesthesia; The Mayo Foundation, University of Minnesota. With a foreword by William J. Mayo, M.D. Second Edition, Revised. Octavo of 567 pages with 367 original illustrations. Philadelphia & London. W. B. Saunders Company, 1928. Cloth \$7.50.

The author has very completely revised the original text. A great many changes have been made and much new matter has been added. The chapter on spinal anesthesia has been rewritten. Many new instruments are described and new methods for regional anesthesia have been introduced. The work is thoroughly illustrated.

The Surgical Clinics of North America (issued serially, one number every other month.) Volume 8, number 5. (New York Number—October 1928) 293 pages with 141 illustrations. Per Clinic year (February 1928 to December 1928.) Paper \$12; Cloth \$16. Philadelphia and London. W. B. Saunders Co.

In this volume Bancroft discusses the advances in the treatment of acute appendicitis. Tenney, Bancroft and Cole present some cases of gastric ulcer. Cole has a paper on roentgenology in gastroenterology. Bancroft and Jessup present cases of hemorrhagic cyst of spleen and adenomyoma of the vesico-vaginal septum. Stanley Brown discusses the treatment of phlebitis with intravenous injections of gentian-violet. Murray has a clinic on fractures. Barringer describes a method for the control of hemorrhage in suprapubic prostatectomy. Dean presents some unusual cases of kidney disease. Neer discusses the diagnosis of operative acute mastoiditis. Berg discusses the radical operative cure of gastric and duodenal ulcer. Held has a paper on the roentgen diagnosis of gall-bladder disease. There are also a number of other very interesting papers.

A Text Book of Pharmacology and Therapeutics. By Hugh A. McGuigan, M.D. Professor of Pharmacology and Therapeutics, University of Illinois, School of Medicine, Chicago. Octavo volume of 660 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, \$6.00 net.

The author of this work appreciates the need for careful consideration of the action of drugs and has endeavored to present the relationship between physiology, biochemistry and pharmacology. He has very carefully analyzed the basis for the clinical application of remedies where it is possible to do so. This work on pharmacology seems to meet the requirements of the modern practitioner particularly well.

Problems in Surgery; University of Washington Graduate Medical Lectures for 1927. By George W. Crile, M.D., edited by Amy F. Rowland. Octavo volume of 171 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, \$4.00 net.

This is an intensely interesting book. It is an intricate study of the causes of a great many conditions found in connection with surgical operations, and in surgical cases before and after operations. From an analysis of these he readily arrives at methods for prevention or relief. The author makes some very valuable suggestions to the surgeon who operates upon gall-bladders and thyroids—conclusions arrived at from careful and persistent observations in an unusually large experience.

—R—

#### MEDICAL SCHOOL NOTES

Dr. Robert M. Isenberger, associate professor of pharmacology, returned the first of October from Rochester, Minn., where he has been doing research work at the Mayo Clinic with Dr. L. G. Rowntree for the last four months.

Dr. T. G. Orr recently attended the meeting of the International Assembly of the Inter-State Post Graduate Medical Association of North America at Atlanta and read a paper on "Recent Advances in the Treatment of Intestinal Obstruction."

The names of the following members of the faculty appear in the 1928-1929 edition of "Who's Who in America": Dr. Logan Clendening, Dr. Russell L. Haden, Dr. Ralph H. Major, Dr. Frank C. Neff, and Dr. Richard L. Sutton.



The following members of the faculty read papers at the meeting of the Medical Association of the Missouri Valley in Omaha, on October 30: Dr. P. T. Bohan, Dr. R. L. Haden, Dr. E. C. Padgett, Dr. Logan Clendening, Dr. Nelse F. Ockerblad and Dr. Thomas G. Orr were present at this meeting. Dr. Ralph H. Major was elected President.

Dr. F. C. Neff attended the meeting of the Central Pediatrics Society in Pittsburgh, on October 26-27.

At the meeting of the American Academy of Ophthalmology and Otolaryngology at St. Louis, recently, the following members of the faculty were on the program: Dr. Sam E. Roberts and Dr. O. J. Dixon.

Dr. Thomas G. Orr recently attended the meeting of the Frisco Railroad Medical Society at Pensacola, Florida. He read a paper on "Treatment of Intestinal Obstruction" at this meeting.

Dr. H. R. Boone, class of 1917, is now a Lieutenant Commander in the Navy. He is stationed at Pensacola, Florida.

Dr. W. M. Alberty, class of 1917, is practicing in San Diego, California.

Dr. Robert Keys, class of 1927, recently visited the Bell Memorial Hospital.

Dean H. R. Wahl recently returned from attending the annual meeting of the Association of American Medical Colleges at Indianapolis. Dr. Wahl gave a paper on "Experiments in Correlating Clinical, Laboratory and Didactic Instruction in Psychiatry and Therapeutics."

The new nurses' home has recently been opened and is now being occupied by the nurses.

#### **Medical Profession of Western Hemisphere to Congress in Havana**

The next congress of the Pan-American Medical Association will be held in Havana, Cuba, from December 29, 1928, to January 3, 1929. The program which is being arranged by the President, Dr. Fred H. Albee of New York City, will be a strong one, and will include four orations upon the subjects of surgery, medicine, pediatrics, and tropical medicine.

Dr. William J. Mayo will give the oration on Surgery, and Dr. Lewellys Bar-

ker of Johns Hopkins University the Oration on Medicine. Papers will be read in both Spanish and English.

This congress will be representative of the medical profession of the entire Western Hemisphere. Chapters of the Association have been and are being organized in various centers of North America and Central America, as well as in the Antilles, all of which will be represented at the Congress.

One of the recent accomplishments of the Pan-American Medical Association is the establishment of the Pan-American Hospital in New York City for the benefit of the Latin-speaking people.

A large attendance is solicited.

#### **Syphilitic Therapy**

The Journal of Chemotherapy for October, (Volume V, No. 3) contains an interesting article on "The Chemotherapy and Biologic Therapy of Malignant Tumors," by Dr. John A. Kolmer. There are, also, articles on "The Chemotherapy of Protozoan Infections Other Than Syphilis," "Syphilitic Therapy," and "Liver Treatment in Secondary Anemia," also, "New Views on Chemotherapy of Cancer," editorials, abstracts, and therapeutic news.

This quarterly journal will be sent gratis to physicians interested in chemotherapy, research and the treatment of syphilis. For copies address the Dermatological Research Laboratories, 1720 Lombard Street, Philadelphia, or the Abbott Laboratories, North Chicago, Ill.

#### **The Season for Cod-Liver Oil**

Cod-Liver Oil is in greater demand in winter than in summer because of its calories and its vitamins. The calories can, of course, be obtained by other means, but vitamins, especially vitamin D, are on the ebb generally in cold weather, and there is relatively little direct sunlight to increase the amount.

Vitamin D is antirachitic and a defense against bronchitis; and a cod-liver oil that is known to be rich in it and otherwise acceptable should be preferred to brands of uncertain vitamin content. The Standardized Cod-Liver Oil of Parke, Davis & Co. goes beyond U. S. P. requirements in being assayed for both

fat-soluble vitamins, A and D, and the manufacturers claim that it contains a minimum of 13,500 A units and 3,000 D units in each fluid ounce.

We understand that interested physicians can obtain a bottle free for examination and trial on request.

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### **Doc Brownell and Jim Munro**

MALAR BONE, M.D.

"Why don't you pay me what you owe,"  
Said Doc Brownell to Jim Munro,  
"You've sold your wheat and corn and rye  
"And I've got gas and clothes and food to buy."  
"Jest take yore bill along to —ell."  
Said Jim Munro to Doc Brownell,  
"My kids is well and so's my wife.  
"I never felt better in all my life,"  
Said Jim as he puffed on an old cob pipe  
And munched an apple not quite ripe.  
Then old Doc smiled, his eyes aglow,  
And said, very kindly and also slow:  
"Let's not quarrel in all this heat  
"Just come inside, I'll stand a treat."  
Then to the soda squirt he said:  
"Two bottles off the ice, labels all red,  
"For a coat of arms the devil rampant,  
"Jim will sure drink all that I can't."  
All his bottle and most of Doc's went down Jim's  
throat

And he smacked and grunted like a red haired  
shoat.

"Thanks Doc," he said, "I was thirsty and hot  
"But that thar fiz shore teched the spot."  
Jim went home, unhitched his team, fed the stock,  
Ate his supper and went to bed at eight o'clock.  
About nine that night Doc's telephone rang.  
As he went to the phone he almost sang,  
Jim's wife he knew was on the line  
And the plans he'd made were coming on fine.  
"Jim's groaning with pain and tossing about,  
"Please Doctor, won't you come right out?"  
Of course Doc went, wanted to go,  
But he couldn't drive straight for laughing so.  
He got there soon and went inside.  
Where the doors and windows were open wide,  
Where an unpleasant odor filled the room  
And a tallow candle just pierced the gloom,  
Lay stretched on a bed what was left of Jim,  
With his face gray and wan in the light that was  
dim.

Doc felt his pulse and looked him carefully over  
Then said in a voice both sad and sober:  
"Poor old Jim, you were once my friend,  
"I hate to see you approaching the end.  
"Four hours ago you were hearty and well  
"But now—the Lord alone can tell.  
"I know where you will be when you are dead,  
"So I'll just send my bill right on ahead."  
Jim looked scared and could hardly speak,  
His big strong voice had grown so weak.  
"Please save me Doc, you shore know how.  
"I'll pay yore bill. I'll pay it now.  
"Git my pants, Ma, and pay his bill  
"Give him a dollar for ev'ry dam'd pill."  
Doc gave him some drops that helped him a heap  
And told him to lie still and he'd soon go to sleep.  
He put on his hat and started for town,  
But stopped at the door and said with a frown:  
"Bear this in mind—when I ask you to pay  
"Think very carefully what you should say.  
"That fiz you drank, and those green apples, too,

"Were mighty good for me, but awful bad for  
you."

—————R—————

### **Treatment of Typhoid by So-called Detoxicated Vaccine**

The formaldehyde detoxification principle elaborated by Ramon has been applied to typhoid vaccine. The method consists in incubating cultures of the typhoid bacillus with formaldehyde in such a manner that the toxic principle is destroyed while the antigenic properties remain, and is similar in principle to diphtheria toxoid (which has been admitted to New and Nonofficial Remedies). The number of cases on which this vaccine was tried does not permit the drawing of conclusions as to its value. (J.A.M.A., Nov. 3, '28.)

—————R—————

### **Deaths From Contaminated Toxin-Antitoxin**

At Bundaburg, Australia, last January, twelve of twenty-one children inoculated with diphtheria toxin-antitoxin at one time died within the next few days. An extensive investigation was made into the causes of the fatalities. The mixture used was issued in rubber-capped bottles, but without the addition of an antiseptic, in order to avoid possible risk from freezing. Each bottle was to be used at one time, but this was not done at first, and fluid was withdrawn from one bottle several times in the course of a week. The investigation brought out that the symptoms and the postmortem and bacteriologic observations were all suggestive of an overwhelming infection with staphylococci. Evidently the vial was contaminated during the previous injections, and in the absence of an antiseptic the organisms multiplied in the fluid. (J.A.M.A., Nov. 17.)

—————R—————

### **Treatment of Severe Diboethriocephalus Latus Anemia, With High Caloric Diet, Rich in Liver Extracts and Vitamins**

Oscar Richter, Siegfried Maurer and Mary Eyl, Chicago (J.A.M.A., Nov. 10, 1928), report the case of a woman, aged 24, with severe dibothriocephalus latus anemia pernicious in type that showed marked improvement hematologically and clinically on treatment with a high



caloric diet rich in liver extract and vitamins. An interesting feature of this case consists in the contraindication to antihelminthic therapy, itself dehydrating and toxic, when the patient was first seen and found to be moribund. After improvement on proper dietetic management, however, such therapy was instituted without ill effect. They cite a report of patients with syphilis with pernicious blood pictures safely receiving antisyphilitic treatment only after preliminary and combined management with a high caloric diet rich in liver extract and vitamins.

—R—

### Exercise in Cardiac Disease

David P. Barr, St. Louis (J.A.M.A., Nov. 3, 1928), emphasizes several principles which have a bearing on the conception of exercise in cardiac disease. He says: In the study of muscular exertion two kinds of inadequacy must be considered separately. The first of these is a failure to supply the tissues with sufficient blood and oxygen. This may occur in any person at all, from the most highly trained athlete to the severely decompensated cardiac patient—but with different amounts of work. Whenever it occurs there is an oxygen debt, an accumulation of lactic acid and an exaggerated pulmonary response. Intrinsically it does not imply any abnormality, or cardiac weakness. The second form may be designated congestive heart failure and arises because the cardiac output does not keep pace with the inflow of blood to the heart. It is usually if not always dependent on myocardial insufficiency or disease. It occurs earlier and with less exertion when a mechanical factor, such as mitral stenosis, is also present. In normal persons, exercise may be attempted in which sufficient supply of blood and oxygen to the tissues is impossible. Congestive cardiac failure, however, does not occur because respiratory factors limit the exercise before the maximum cardiac response has been attained. The patient with heart disease incurs an oxygen debt from more trivial causes. Dyspnea occurs earlier and is more severe. As in normal persons, the lungs may be the limiting factor and may protect the heart. The protection, however,

may be insufficient and congestive heart failure may result. In both normal persons and cardiac patients, dyspnea is the greatest safeguard against the possibility of heart strain and cardiac failure. Patients who have mechanical factors such as mitral stenosis have greater dyspnea and are more protected than those patients in whom this factor is absent. In patients with syphilitic disease of the aortic valve, with chronic hypertension and perhaps with myocardial defects, it may not be safe to accept dyspnea as the warning signal for the control of exercise. The observance of other symptoms or, indeed, an entirely arbitrary limitation of exertion, may be necessary to furnish sufficient protection.

—R—

### Jejunal and Gastrojejunal Ulcer and Their Associated Roentgenologic Signs

John D. Camp, (J.A.M.A., Nov. 10, 1928), is of the opinion that the importance and apparent frequency of the niche or crater deformity in the jejunum or stoma as a positive sign of jejunal or gastro-jejunal ulceration has not been emphasized in the past except by a few observers. Others have doubted its frequent existence in these lesions. In this series a niche was definitely demonstrated by the examiner in eight of ten consecutive cases diagnosed as positive by the roentgenologist. In seven instances the niche was located in the jejunum and in one it was found in the stoma. Five patients were operated on and an ulcer corresponding to the niche shadow in the jejunum was found in each. The results of these observations suggest that the niche deformity is frequently present. As it represents irrefragable evidence of disease, its presence should be sought for in all cases.

—R—

### Value of Bronchoscopy in Diagnosis of Malignant Conditions of Lungs

Porter P. Vinson, Herman J. Moersch and B. R. Kirklin, Rochester, Minn. (J. A.M.A., Nov. 10, 1928), point out the value of bronchoscopy in the diagnosis of malignant conditions of the lungs. Of the twenty-three patients observed previous to Jan. 1, 1928, nineteen are dead,

the average duration of life being four and a half months; one patient cannot be traced, and three patients are living and improving under deep roentgen-ray treatment. In early primary carcinoma of the bronchus the roentgenogram shows a typical unilateral hilar density with infiltrating borders definitely centered at the hilum, and an atelectatic or occasionally a bronchiectatic appearance due to bronchostenosis. The presence of one or both of these phenomena is sufficient evidence on which to recommend a bronchoscopic examination. Malignant lesions are common in the tracheobronchial tree. The chief symptoms are cough, expectoration, hemoptysis, loss of weight, dyspnea, pain in the chest, fever and hoarseness. The most common manifestation is evidence of partial or complete occlusion of the bronchus. Tumors of the tracheobronchial tree are highly malignant. Treatment is not satisfactory but deep roentgen-ray exposures may be helpful. Accurate clinical diagnoses were made in less than half of the cases observed. Bronchoscopy is the safest and most exact method of making an early diagnosis.

—R—

### **Chemical Factors in Toxemia of Intestinal Obstruction**

Thomas G. Orr and Russell L. Haden, Kansas City, Kan. (J.A.M.A., Nov. 17, 1928), review the chemical observations in the upper intestinal tract obstruction and show the widespread character of the changes taking place in all tissues of the body, influencing vitally the chemical processes necessary to maintain normality and life. They show that the changes in the blood noted can be prevented and life prolonged until death results from starvation and exhaustion by the administration of water and sodium chloride. Distilled water, solutions of dextrose and other salts, such as sodium bicarbonate, sodium bromide, ammonium, potassium, calcium and magnesium chloride and the iodides, do not have such an effect. It therefore seems that the sodium chloride and water are necessary to prevent a fatal alteration in the chemistry of the blood and the tissues. The true significance of these chemical studies is the realization that acute upper

intestinal tract obstruction cannot be treated logically and efficiently unless due consideration is given to the chemical changes taking place in the blood. These studies have led directly to the recognition that a sufficient quantity of water and sodium chloride is imperative to combat the dehydration and toxemia incident to such obstruction.

—R—

### **Intradermal (Injection) Vaccination**

The multiple pressure method has been used in thousands of vaccinations performed by various vaccinators in different parts of the country and has successfully met the requirements set forth by Charles Armstrong, Washington, D. C. (J.A.M.A., Nov. 17, 1928), of a satisfactory method. With this method the insertion is made through a drop of virus by pressing the side of the needle point rather firmly against the taut skin and raising and lowering it from twenty to thirty times. The pricks should cover an area never more than one-eighth inch in greatest diameter. The virus is wiped off immediately and, as the trauma is scarcely visible, the uselessness of a shield or dressing, which may lead to unsatisfactory results with any method, is apparent to the person vaccinated. This method gives a typical vesicle of maximum firmness, since the procedure neither removes nor destroys the epidermic and thus, as shown by experience, there is little chance of accidental infection.

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